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Transmittal

To: U.S Environmental Protection Agency
Municipal Assistance Unit (CMU)
1 Congress Street, Suite 1100
Boston, MA 02114-2023

☒ MAIL

Attention: RGP-NOC Processing

☐ OVERNIGHT

Date: November 22, 2005

Re: Simmons College School of Management

☐ COURIER

Job No: 4371.9.00

<u>COPIES</u>	<u>DATE</u>	<u>DESCRIPTION</u>
1	11/04/2005	REQUEST FOR APPROVAL OF CONSTRUCTION SITE DEWATERING UNDER REMEDIATION GENERAL PERMIT, MAG910000

These are transmitted as checked below:

☒ For approval ☐ For your use ☐ As requested ☐ For review and comment ☐ _____

Copy (By Mail):

Massachusetts Department of Environmental Protection , Division of Watershed Management, 627 Main Street, 2nd floor, Worcester, MA 01608 (Mr. Robert Kubit)
Boston Water & Sewer Commission, 980 Harrison Avenue, Boston, MA 02119 (Mr. Francis M. McLaughlin)
Simmons College, 300 The Fenway, Boston, MA 02115 (Mr. Ed Jacques)

NOV 28 2005

Eirlys H. Vanderhoff



Geotechnical Engineers

OC
MAG 9/10/66

**REQUEST FOR APPROVAL OF
CONSTRUCTION SITE DEWATERING
UNDER
REMEDATION GENERAL PERMIT
MAG910000**

**SIMMONS COLLEGE
SCHOOL OF MANAGEMENT**

BOSTON

MASSACHUSETTS

to

**US EPA, Massachusetts DEP and Boston
Water and Sewer Commission**

NOV 28

November 4, 2005

Project No. 4371



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November 4, 2005

U.S Environmental Protection Agency
Municipal Assistance Unit (CMU)
1 Congress Street, Suite 1100
Boston, MA 02114-2023

Attention: RGP-NOC Processing

Massachusetts Department of Environmental Protection
Division of Watershed Management
627 Main Street, 2nd floor
Worcester, MA 01608

Attention: Mr. Robert D. Kubit

Reference: Simmons College - School of Management; Boston, Massachusetts
Notice of Intent for Construction Dewatering Discharge Under RGP MA910000

Ladies and Gentlemen;

The purpose of this letter report is to provide a summary of the groundwater quality information and geotechnical engineering input in support of an application for permission from the U.S. Environmental Protection Agency (US EPA) and the Massachusetts Department of Environmental Protection (DEP) for the temporary discharge of groundwater into the Muddy River via a storm drain system during construction at the above referenced site. Refer to the Project Location Plan, **Figure 1**, for the general site locus.

These services were performed and this Notice of Intent was prepared in accordance with our proposal dated March 9, 2005 and the subsequent authorization of Simmons College on June 21, 2005. These services are subject to the limitations contained in **Appendix A**.

The required EPA Remediation General Permit (RGP) application and the Boston Water and Sewer Commission Dewatering Discharge Permit Application are included in **Appendix B**. Since the property is part of a listed disposal site, we understand that no additional application is required by DEP.

Applicant

The applicant for the NPDES General Permit is:

Simmons College
300 The Fenway
Boston, MA 02115

Attention: Ms. Janet Fishstein

Tel: 617-521-2278
Fax: 617-521-3170

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Existing Site Conditions

The subject site is located on the main academic campus of Simmons College and is bounded by the Park Science Center to the west, the Main College Building to the north, and the One Palace Road building and associated below-grade parking garage to the east. Property owned by the Boston Latin School is located south of the project footprint.

The site is currently utilized as an at-grade parking area with the majority of the site blanketed by bituminous concrete pavement and some grassed/landscaped margins located within the north and west portions of the site. The existing ground surface across the subject site is relatively flat, varying from approximately Elevation +16 to about Elevation +18. Elevations as referenced herein refer to the Boston City Base (BCB) Datum which is 5.65 feet below the National Geodetic Vertical Datum (NGVD).

The area surrounding the site is occupied by residential, commercial and educational properties with adjacent paved parking areas. The site and surrounding area are serviced by public utilities including gas, water and electricity. Wastewater is discharged into the City of Boston sanitary sewer system. Catch basins are utilized to control surface drainage along The Fenway, Palace Road and Avenue Louis Pasteur.

Site History

According to readily available historic information, and based on our review of relevant Sanborn maps of this section of Boston, the area was gradually filled during the period from 1888 to 1897 to reclaim low lying lands associated with the Muddy River. At the end of the 19th century the area was completely filled and subdivided into residential parcels that were depicted as undeveloped land. The Main College Building of Simmons College was constructed at the subject site during the early years of the 20th century. In summary, readily available historic information suggests that the area of the proposed project has been occupied by the existing structure and use for the past fifty or so years.

Site Environmental Setting and Regulatory Status

The site is not located within a Zone II of a public water supply, an Interim Wellhead Protection Area, a Potentially Productive Aquifer or a Zone A of a Class A surface water supply reservoir. There are no surface water bodies located within the site boundaries. The nearest surface water body is the Muddy River, located approximately 300 feet northeast of the subject site.

There are no known private or public drinking water supply wells located within the site boundaries, nor within a half mile of the site. The site is located within 500 feet of a residentially zoned area, and within 500 feet of an institution as defined in the Massachusetts Contingency Plan (MCP). The site is located within 500 feet of a protected open space (public recreational area).

The proposed construction area is part of a DEP-listed disposal site to which DEP assigned Release Tracking Numbers (RTNs) 3-18384 and 3-21446 based on two releases of petroleum hydrocarbons. According to a report titled "Phase II Comprehensive Site Assessment Report and Class A-2 Response Action Outcome", prepared by Woodard & Curran and dated September 2002, permanent solutions with levels of No Significant Risk were achieved for the two petroleum releases. In addition, according to



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Woodard & Curran "[v]arious metals and Polycyclic Aromatic Hydrocarbons (PAH) are present in fill materials at and surrounding the site. These are associated with the fill materials and are considered indicative of Background soil conditions. No significant risk is associated with these materials."

During construction pre-characterization for the Simmons College Graduate Center that abuts the proposed parking garage and future School of Management Building to the south, McPhail Associates, Inc. identified reportable releases of lead, benzene and naphthalene. DEP assigned RTN 3-19637 to the releases. These releases were addressed under a RAM that was completed concurrently with construction. A permanent solution with a level of No Significant Risk was also achieved for these releases.

Results of testing of groundwater samples obtained from monitoring wells on or near the proposed construction area during Woodard & Curran and McPhail's previous investigations indicated no detectable levels or levels well below DEP's applicable GW-2 or GW-3 Cleanup Standards for the compounds of concern for the three RTNs. In addition, no other compounds were reported in groundwater above or approaching DEP's applicable reporting thresholds. The results of previously completed groundwater testing are summarized in **Table 1**.

Proposed Scope of Site Development

The proposed development is understood to consist of a five-level below-grade parking structure occupying an approximate 53,000 square-foot plan area. The proposed new building is completely surrounded by existing campus buildings to the north, east and west, and by the campus of the Boston Latin School to the south. The lowest level slab of the proposed garage is understood to be at Elevation - 37, necessitating an approximate 55-foot excavation below the existing ground surface. Approximate limits of the proposed garage footprint and subsurface investigation locations are shown on **Figure 2**.

Project plans also include the construction of a five-story above-grade structure, the future School of Management building, over the below-grade parking garage at its southeast corner and the addition of a future 9-story above-grade structure located over the garage's southwest corner. An interior courtyard will be constructed above the below-grade parking levels across the portion of the site that is not occupied by above-grade structures.

Subsurface Conditions

A detailed description of the subsurface conditions encountered at each of the recent geotechnical and geoenvironmental exploration locations is documented on the soil boring logs contained in **Appendix C**. Groundwater monitoring reports are contained in **Appendix D**. Approximate exploration locations are as indicated on the enclosed Subsurface Exploration Plan, **Figure 2**. Following is a discussion of the generalized subsurface conditions across the site which are inferred primarily from the recent explorations, and also from our knowledge of local site geology, foundation design and construction experience on the Simmons College Campus.

The explorations indicate that the project site is typically covered by a 3 to 6-inch thickness of bituminous concrete. Underlying the bituminous concrete, the explorations encountered an 8.5 to 16-foot thickness of fill material. The composition of the fill generally varies from a very loose to compact, brown to black



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gravelly sand with some silt, varying to a sand, silt and gravel. The fill deposit also contains varying amounts of brick, glass, wood, ash and cinders.

Underlying the fill deposit, the borings encountered a 16.5 to 23-foot thick, very soft to firm, gray to brown organic deposit varying in consistency from an organic silt and fibrous peat to a gray organic silt with a trace to some shells and peat fibers.

The boreholes generally encountered a relatively thin deposit of glacial outwash underlying the organic deposit. The glacial outwash deposit typically consists of a compact to very dense, gray sand and gravel with some silt, varying to a silt and gravel with some sand. Where encountered, the glacial outwash deposit ranged from 1 to 6 feet in thickness.

Underlying the glacial outwash deposit, the borings encountered an interbedded marine sand and clay deposit ranging from about 105 to 121 feet in total thickness. In each of the borings, the marine clay unit was encountered within the upper portion of the marine deposit directly beneath the organic and/or glacial outwash deposits. The upper portion of the marine deposit generally consists of an approximate 50 to 75-foot thickness of marine clay with interbedded layers of sand which vary from about 2 to 13 feet in thickness. The lower portion of the marine deposit primarily consists of the marine sand. The marine sand deposit was generally observed to range from about 25 to 55 feet in thickness.

Underlying the marine deposit, the boreholes encountered a very dense deposit of glacial till at depths ranging from 140 to 155 feet below the existing ground surface. Underlying the glacial till deposit, the boreholes typically encountered a shale-like bedrock deposit referred to locally as Cambridge Argillite.

The groundwater level at the site was observed within the observation wells to range from about Elevation +7.3 to Elevation +9.5. The groundwater at the site is considered to be seasonally perched on the surface of the relatively impervious organic deposit, particularly following periods of heavy precipitation. It is anticipated that future ground-water levels across the site may vary from those reported herein due to factors such as normal seasonal changes, periods of heavy precipitation, and alterations of existing drainage patterns.

Construction Dewatering

Excavation within the proposed below-grade garage footprint will likely extend to a depth of approximately 45 feet below the observed groundwater level. In order to permit construction of the below-grade portion of the structure and provide an effective groundwater cut-off during construction, an earth retention system consisting of a concrete diaphragm wall (i.e. slurry wall) will be installed as the perimeter foundation walls of the structure. Hence, construction dewatering will be required within the groundwater cut-off area to allow the construction of the below-grade structures. The majority of the anticipated dewatering will occur during excavation following the installation of the groundwater cut-off. Additional minor dewatering may occur during installation of the lowest elevation concrete slabs.

It is estimated that the typical continuous groundwater discharge required during the initial stages of the excavation phase of the construction will be on the order of 35 to 100 gallons per minute (GPM). The quantity of groundwater discharged is based on the relatively pervious nature of the existing fill material. A reduction in the rate of discharge is anticipated to occur during excavation of the less permeable organic and marine deposits and the presence of the earth support system surrounding the excavation which will



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act as a groundwater cut-off. A rate of discharge of 15 to 25 GPM is envisioned during this stage of excavation. These estimates of discharge do not include surface runoff which will be removed from the excavation during the duration of a rain storm and for a short time thereafter.

The proposed new building is surrounded by other campus buildings to the north, east and west, and by Boston Latin School to the south and will occupy the majority of the project area. Because of the relatively impervious nature of the organic deposit below the fill materials, and because a groundwater cut-off wall will be installed at the perimeter of the property, temporary on-site collection and recharge of groundwater is not feasible. Therefore, construction dewatering will require the discharging of groundwater into the Muddy River via the existing storm drain system.

A review of available plans at the offices of the Boston Water and Sewer Commission indicates that a 36-inch diameter storm drain line is located along the portion of Avenue Louis Pasteur which borders the subject site. The 36-inch line discharges into a 30-inch square outfall located 350 feet northwest of the intersection of Avenue Louis Pasteur and The Fenway, which discharges through outfall DO 045 into the nearby Muddy River located approximately 250 feet northeast of the site. Additionally, a 24-inch diameter storm drain is located along Palace Road, discharging to the nearby Muddy River through outfall DO 047. The location of the storm drains and relevant catch basins with relation to the subject site are indicated on **Figure 3**.

Recent Groundwater Chemical Analysis Results

On September 6, 2005, McPhail Associates, Inc. obtained a groundwater sample representative of the proposed discharge from the on-site monitoring well B-222 (OW). The groundwater sample was sent to a certified laboratory and chemically analyzed for the presence of pH, total suspended solids (TSS), total petroleum hydrocarbons (TPH), total oil and grease, and total and dissolved Priority Pollutant 13 metals (PP-13). Groundwater samples were also chemically tested during Massachusetts Contingency Plan response actions for the listed disposal sites. The approximate locations of the monitoring wells are indicated on the enclosed **Figure 2**.

Chemical test results are summarized in **Table 1** and laboratory data are included in **Appendix E**. The results of chemical testing indicate the following:

1. **pH.** The tested sample exhibited a level of 6.8 Standard Units. The pH limit for discharge into surface waters in Massachusetts is between 6.5 to 8.3. Therefore, the detected level is within the range permitted for discharge into a body of surface water.
2. **TSS.** Total suspended solids (TSS) were detected in the tested sample at a concentration of 280 milligram per liter (mg/l), which is in excess of the upper limit of 100 mg/l established in the NPDES General Permit. The detected level of TSS is considered to be attributable to the disturbance of suspended solids in the monitoring well during development of the well and subsequent sampling. However, it should be noted that groundwater will be pre-treated by passing the water through two 5,000 gallon sediment tanks prior to discharge in order to reduce the concentration of TSS in the effluent.
3. **VOC.** No VOC were detected in the tested sample above the laboratory's method detection limits. Previous test results from another well indicated low levels of bromomethane at 16 micrograms



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per liter (ug/l) in one sample and of MtBE in two samples. The MtBE results were well below the RGP permit standard of 70 ug/l.

4. **SVOC.** Samples tested for the listed disposal sites on or adjacent to the proposed construction area were tested for the presence of SVOC or for EPH Targets. No detected levels of EPH Targets were reported in three groundwater samples. The only reported SVOC compound was 3-Methylphenol/4-Methylphenol at 6.8 ug/l. Total phenols were therefore well below the RGP Permit standard of 300 ug/l.
5. **PCBs.** A groundwater sample previously tested for the disposal site at the proposed construction site indicated no detected levels of pesticides or PCBs.
6. **TPH.** TPH was detected in the tested sample at a concentration of 0.34 mg/l. The tested sample did not exhibit the presence of sheen or other visual/olfactory evidence of petroleum-related contamination. The RGP Permit limit for TPH is 5.0 mg/l.
7. **Total Oil and Grease.** Total oil and grease was not detected in the tested sample at a concentration in excess of the laboratory reported method detection limits. A sample tested previously
8. **Dissolved PP-13 Metals.** Dissolved beryllium, cadmium, copper, mercury, silver and thallium were not detected at concentrations in excess of the laboratory reported method detection limits in the tested sample. Dissolved antimony, arsenic, chromium, lead, nickel, selenium and zinc were detected at concentrations of 0.6 ug/l, 1.6 ug/l, 0.7 ug/l, 0.8 ug/l, 1.9 ug/l, 2 ug/l and 16 ug/l, respectively. Only dissolved lead at 0.8 ug/l exceeded the RGP Permit Limit.
9. **Total PP-13 Metals.** Total Priority Pollutant-13 Metals beryllium, silver, and thallium were not detected at concentrations in excess of the laboratory reported method detection limits in the tested sample. Eight metals, antimony, arsenic, cadmium, chromium, copper, lead mercury, nickel, selenium and zinc were detected in the tested sample at concentrations of 3.5 ug/l, 10.6 ug/l, 0.9 ug/l, 18.1 ug/l, 68.1 ug/l, 1,020 ug/l, 5.6 ug/l, 8.6 ug/l, 2 ug/l and 784.5 ug/l, respectively. Levels of total arsenic, cadmium, copper, lead, mercury and zinc are in excess of the RGP Permit Limits.

Therefore to calculate the potential impact of metals on the receiving waters, a dilution factor was calculated for the discharge to the Muddy River. In accordance with the formula, $DF = (Q_d + Q_s)/Q_d$

where,

DF = dilution factor

Q_d = maximum discharge in cubic feet per second (cfs) = 0.223 cfs

Q_s = receiving water 7Q10 Flow (cfs)

and where,

7Q10 = Minimum flow (cfs) for 7 consecutive days with a recurrence interval of 10 years (US Army Corps of Engineers low flow value for Muddy River) = 6 cfs,

then DF = 27.9



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Based on a mean low flow of 6 cubic feet per second (cfs) for the Muddy River, as reported by the Army Corps of Engineers in a 1996 study, and the maximum estimated discharge volume of 100 gallons per minute (0.223 cfs), the dilution range for the discharge water is estimated to be between 10 and 50. Total copper, total lead, total mercury and total zinc exceeded the applicable dilution range concentrations.

Concluding Remarks - Groundwater Chemical Analyses

The tested sample from monitoring well B-222 (OW) did not exhibit the presence of a sheen or visual and/or olfactory evidence of contamination. In summary, the results of the groundwater chemical analyses indicate that with the exception of the detected levels of total lead, and total mercury, none of the analytes were detected at concentrations in excess of the applicable MCP risk-based cleanup standards for groundwater category GW-3 that are protective of surface water and the environment. With regard to the RGP standards, all dissolved metals met the applicable dilution range concentrations, but total copper, total lead, total mercury and total zinc exceeded the applicable dilution range concentrations.

Based on the chemical analysis results for dissolved metals compared with total metals and the elevated level of Total Suspended Solids in the tested sample, it is our opinion that the detected levels of total metals are mainly attributable to the presence of soil particles in the tested sample. It is also our opinion that as a result of the implementation of TSS reduction measures during the dewatering operation, as detailed below, the discharged water will meet the applicable dilution range RGP Standards for the PP-13 metals.

Groundwater Treatment

Based on the results of groundwater chemical analyses, it is our opinion that sedimentation tanks will be required to settle particulate matter out of the water to meet allowable total suspended solids (TSS) discharge limits established by the US EPA and Massachusetts DEP prior to discharge. Two sedimentation tanks with 5,000-gallons capacity each will be incorporated into the discharge system in series in order to meet allowable discharge limits for TSS established by the RGP, and also to control levels of total metals in the discharge. As indicated above, it is our opinion that the removal of sediment will also result in a reduction in total metals to levels below the RGP permit limits modified by the dilution range calculations.

To document the effectiveness of the sedimentation system, samples of the discharge water will be obtained and tested for the presence of TSS and total metals prior to the start of discharge into the storm drain system. Should the pre-start up testing indicated that the levels of TSS and/or total metals in the effluent from the settling tanks exceed the limits established under the RGP, additional filtration of the effluent will be implemented prior to discharge.

Should the results of testing for total metals continue to indicate an exceedance of the applicable dilution range concentrations after the incorporation of additional filtration to remove particulate matter, an ionization system to removal metals will be incorporated into the treatment system.

Should other contaminants be detected within the discharge water during the construction dewatering



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phase of the project, appropriate treatment will be implemented to address the contaminants.

Summary and Conclusions

Plans for the project site include excavation of materials to a depth of approximately 45 feet below the groundwater surface for construction of a below-grade parking structure and an above-grade School of Management building at a later date. Given the existence of surrounding buildings, subsurface conditions, and the fact that the excavation will extend to the limits of the project area in almost all directions, on-site recharge of construction dewatering discharge is not feasible.

Based on the regulatory status of the site and surrounding properties and on the water quality testing results, it is our opinion that groundwater at the project site is acceptable for discharge into the storm drain system and ultimately into the Muddy River under the EPA's RGP permit. Based on the results of groundwater testing, VOC, SVOC, PCBs and petroleum hydrocarbons were indicated to be well below RGP Standards.

To meet RGP Standards, sediment will be removed from the discharge prior to release into the storm drain system. A sample of the effluent will be obtained prior to discharge to document that the sediment removal system has addressed levels of TSS and total metals or if additional filtration is required.

Should the effluent meet the TSS standards but exceed the applicable dilution range RGP Standards even after additional filtration, an ionization tank will be incorporated into the system to remove total metals.

Sampling and analysis of the effluent will be carried out in accordance with the terms of the NPDES General Permit.

We trust that the above satisfies your present requirements. Should you have any questions or comments concerning the above, please do not hesitate to contact us.

Very truly yours,

McPHAIL ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read "Eirlys H. Vanderhoff".

Eirlys H. Vanderhoff

A handwritten signature in black ink, appearing to read "Ambrose J. Donovan".

Ambrose J. Donovan, P.E., L.S.P.

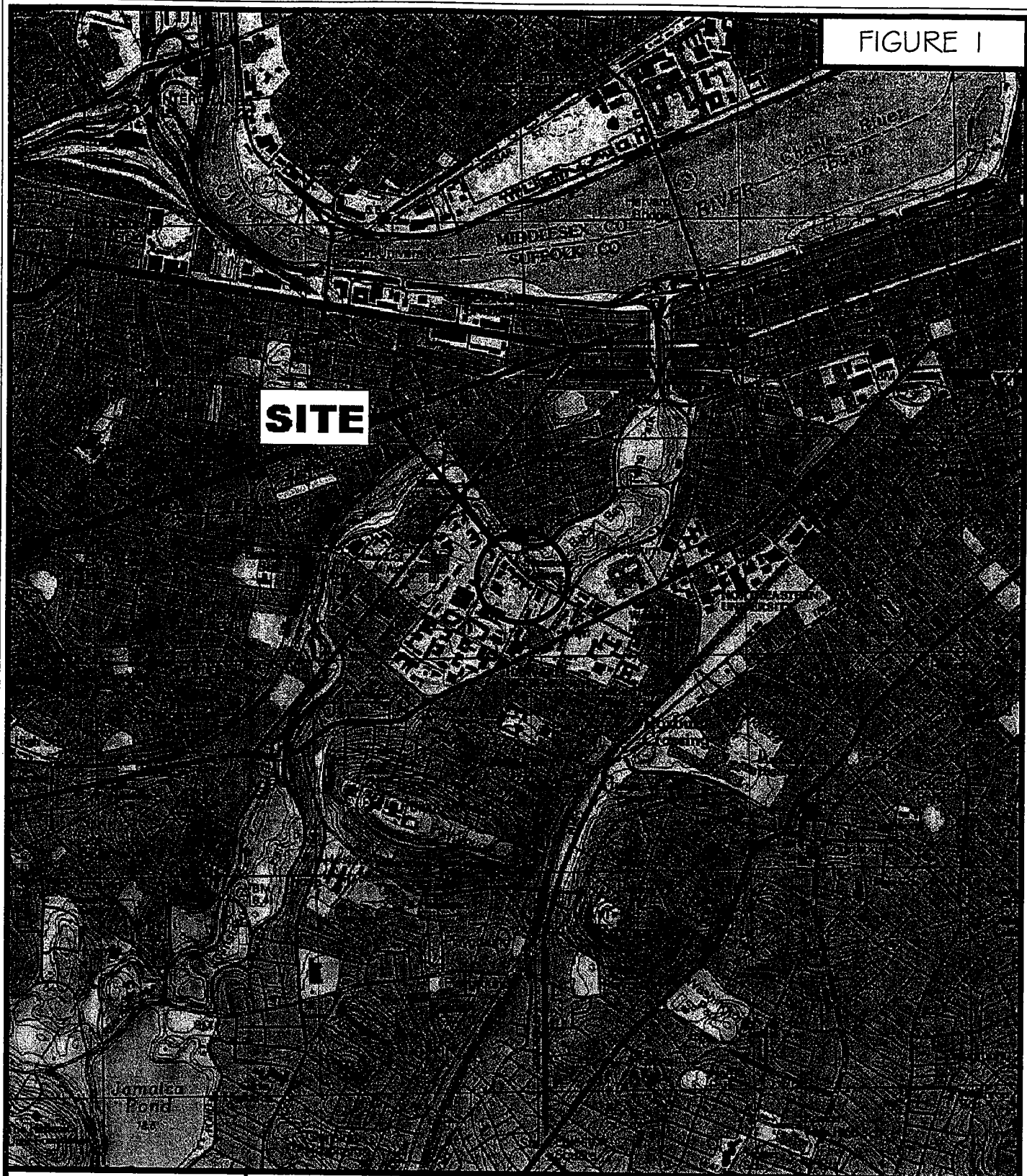
c: Simmons College (Mr. Edward Jacques)

Enclosures

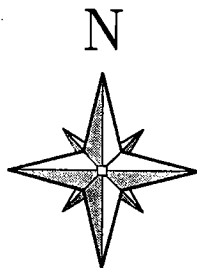
F:\WP5\REPORTS\4371-NPDES.wpd

EHV/tsa

FIGURE 1



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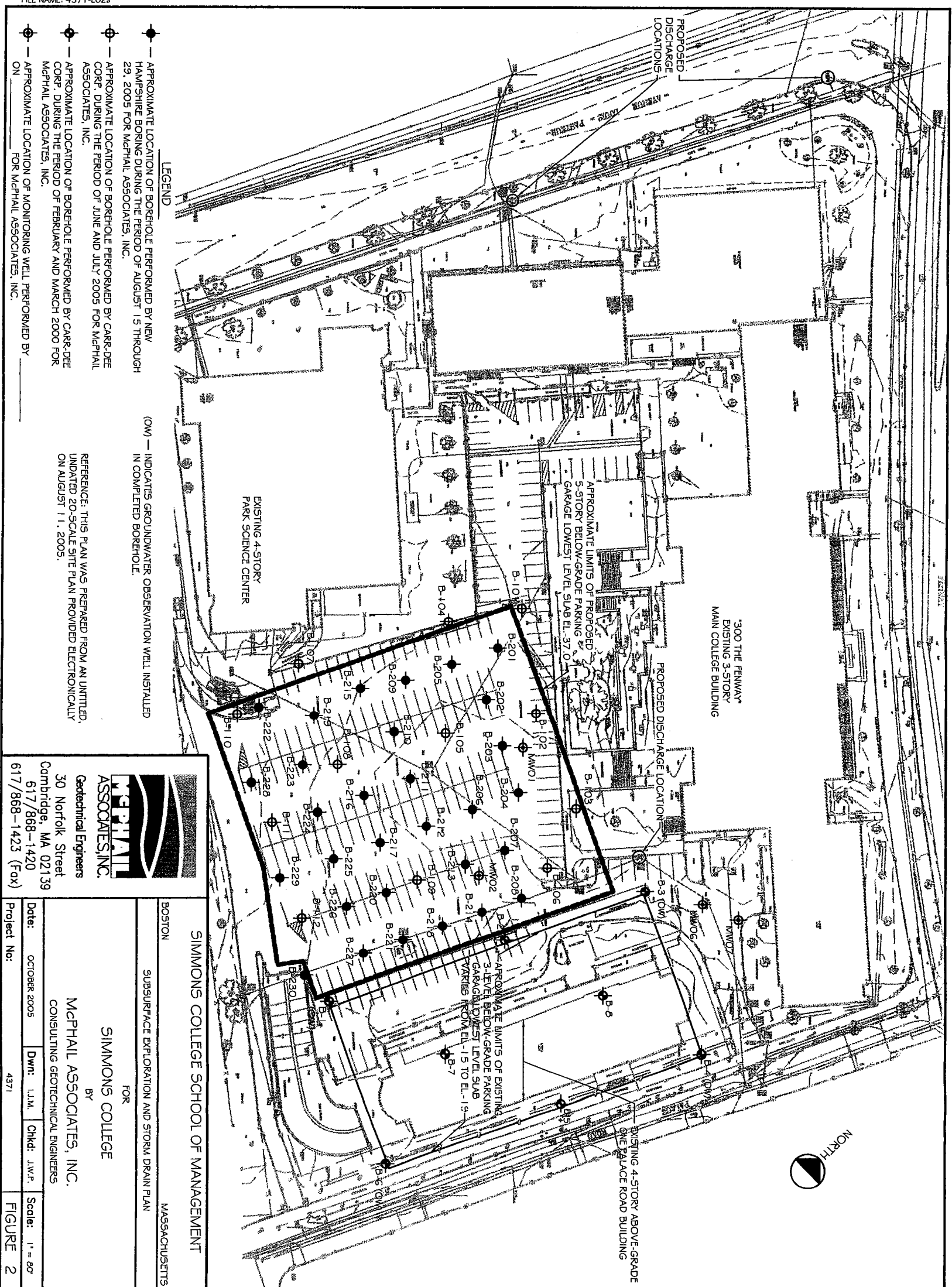
SCALE 1:25,000

PROJECT LOCATION PLAN

SIMMONS COLLEGE
SCHOOL OF MANAGEMENT

BOSTON

MASSACHUSETTS



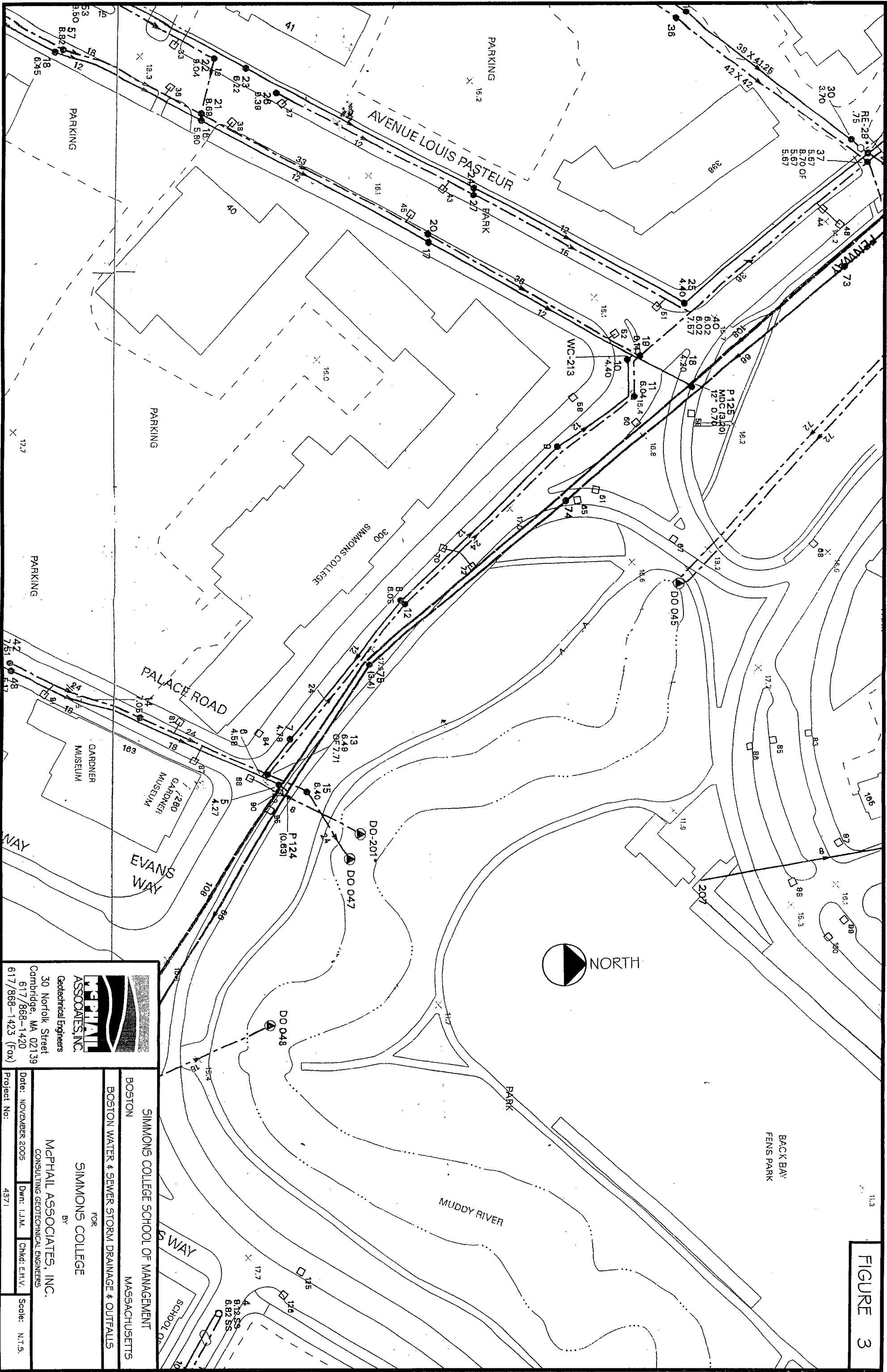



FIGURE 3



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FOR
SIMMONS COLLEGE

BY
McPHAIL ASSOCIATES, INC.
CONSULTING GEOTECHNICAL ENGINEERS

BOSTON
SIMMONS COLLEGE SCHOOL OF MANAGEMENT
MASSACHUSETTS

BOSTON WATER & SEWER STORM DRAINAGE & OUTFALLS

Date: NOVEMBER 2005
Dwn: L.J.M.
Chgd: E.H.V.
Project No: 4371

Scale: N.T.S.

TABLE 1
GROUNDWATER CHEMICAL TEST RESULTS
Simmons College School of Management, Boston

	DEP Method 1 GW-3 Standards	RGP PERMIT LIMITS (Fresh Water)	RGP PERMIT LIMITS (Fresh Water) (10-50 Dilution)	B-4 (OW)	B-4 (OW)	B-1 (OW)	B-6 (OW)	Groundwater - 1	MW01	MW02	MW06	MW07	B-222 (OW) 9/6/05		
Date Sampled				8/22/2000	8/30/2000	12/5/2000	12/5/2000	10/2/2001	5/3/2002	5/3/2002	5/3/2002	5/3/2002	9/6/2005		
Total Suspended Solids (mg/l)	N/A	30		15000	27								280		
pH (standard units)	N/A			7.2	6.8								6.8		
Detected VOC (EPA Method 8260 or 624) (ug/l)															
Bromomethane	50,000	N/A		16		ND [2.0]	ND [2.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]		ND [1.0]		
Methyl-tert-butyl-ether (MTBE)	50,000	70				ND [4.0]	4.6		2.8	ND [1.0]	ND [1.0]		ND [1.0]		
SVOC (EPA method 625) (ug/l)															
3-Methylphenol/4-Methylphenol	N/A	300 (TOTAL)		6.8					EPH Targets-ND	EPH Targets-ND	EPH Targets-ND	EPH Targets-ND			
Pesticides/PCBs (Method 8082/8081)		0.000064		ND											
PP-13 Metals (ug/l)				Total & Dissolved Metals											
				Total Metals					Total Metals		Total Metals		Dissolved Metals		Total Metals
Antimony	300	5.6	60	ND [50]					ND [5]	ND [5]	ND [5]	ND [0.5]	0.6	3.5	
Arsenic	400	10	100	ND [30]					ND [5]	ND [5]	ND [5]	ND [0.5]	1.6	10.6	
Barium									0.95	1	0.54	0.24			
Beryllium	50			ND [5]									ND [0.5]	ND [0.5]	
Cadmium	10	0.8	2	ND [5]					ND [5]	ND [5]	ND [5]	ND [5]	ND [0.5]	0.9	
Chromium (total)	2000	39.1	603	ND [10]					ND [10]	ND [10]	ND [10]	ND [10]	0.7	18.1	
Copper	N/A	2.9	52	ND [10]									ND [0.5]	68.1	
Lead	30	0.5	13	ND [50]					ND [50]	ND [50]	ND [50]	ND [50]	0.8	1020	
Mercury	1	0.9	2.3	ND [0.5]					ND [0.5]	ND [0.5]	ND [0.5]	ND [0.5]	ND [0.2]	5.6	
Nickel	80	16.1	290	ND [25]									1.9	8.6	
Selenium	80	5	50	ND [5]					ND [10]	ND [10]	ND [10]	ND [10]	2	2	
Silver	7	0.4	12	ND [10]					ND [7]	ND [7]	ND [7]	ND [7]	ND [0.5]	ND [0.5]	
Thallium	400			ND [10]									ND [0.5]	ND [0.5]	
Zinc	900	37	666	ND [50]									16	784.5	
Oil and Grease (mg/l)	N/A			6.6									ND [6.0]		
TPH (8100M) (mg/l)	20	5							Total VPH + EPH = ND			Total EPH = ND		0.34	
Extractable Petroleum Hydrocarbons (EPH) (ug/l)															
C9-C18 Aliphatics	20,000								ND [104]	ND [104]	ND [105]	ND [104]	ND [115]		
C19-C36 Aliphatics	20,000								ND [104]	ND [104]	ND [105]	ND [104]	ND [115]		
C11-C22 Aromatics	30,000								ND [104]	ND [104]	ND [105]	ND [104]	ND [115]		
Volatile Petroleum Hydrocarbons (VPH) (ug/l)															
C5-C8 Aliphatics	4,000								ND [40.0]	ND [40.0]	ND [40.0]				
C9-C12 Aliphatics	20,000								ND [40.0]	ND [40.0]	ND [40.0]				
C9-C10 Aromatics	4,000								ND [40.0]	ND [40.0]	ND [40.0]				

Blank -- analysis not performed
ND -- analyte not present above method detection limit



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APPENDIX A

Limitations



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Limitations

The purpose of this report is to present a summary of subsurface conditions, including the results of testing of samples of groundwater obtained from monitoring wells on and near the proposed Simmons College School of Management in Boston, Massachusetts, in support of an application for approval of construction site dewatering discharge into surface waters of the Commonwealth of Massachusetts under EPA's Remediation General Permit MAG910000.

The observations were made under the conditions stated in this report. The conclusions presented above were based on these observations. If variations in the nature and extent of subsurface conditions between the widely spaced subsurface explorations become evident in the future, it will be necessary to re-evaluate the conclusions presented herein after performing on-site observations and noting the characteristics of any variations.

The conclusions submitted in this report are based in part upon chemical test data obtained from analysis of groundwater samples, and are contingent upon their validity. The data have been reviewed, and interpretations have been made in the text. It should also be noted that fluctuations in the types and levels of contaminants and variations in their flow paths may occur due to changes in seasonal water table, past practices used in disposal and other factors.

Chemical analyses have been performed for specific constituents during the course of this site assessment, as described in the text. However, it should be noted that additional chemical constituents not searched for during the current study may be present in soil and/or groundwater at the site.

This report and application have been prepared on behalf of and for the exclusive use of Simmons College. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party nor used in whole or in part by any other party without prior written consent of McPhail Associates, Inc.



Geotechnical Engineers

APPENDIX B

EPA Notice of Intent for Construction Site Dewatering Discharge

Boston Water and Sewer Commission Dewatering Discharge Permit Application

B. Suggested Form for Notice of Intent (NOD) for the Remediation General Permit

1. General site information. Please provide the following information about the site:

a) Name of facility/site: Simmons College School of Management		Facility/site address: 300 The Fenway	
Location of facility/site: longitude: 71.10 latitude: 42.34	Facility SIC code(s): 8221	Street: The Fenway	
b) Name of facility/site owner: Simmons College		Town: Boston	
Email address of owner: janet.fishtein@simmons.edu		State: MA	Zip: 02115 County: Suffolk
Telephone no. of facility/site owner: (617) 429-8840			
Fax no. of facility/site owner: (617) 737-4441			
Address of owner (if different from site):	Owner is (check one): 1. Federal ___ 2. State/Tribal ___ 3. Private <input checked="" type="checkbox"/> 4. other, if so, describe: _____		
Street:			
Town:	State: MA	Zip:	County:
c) Legal name of operator: Simmons College		Operator telephone no: (617) 429-8840	
		Operator fax no.: (617) 737-4441	Operator email: janet.fishtein@simmons.edu
Operator contact name and title: Janet Fishtein			

Address of operator (if different from owner):		Street:	
Town:	State:	Zip:	County:

d) Check "yes" or "no" for the following:

- Has a prior NPDES permit exclusion been granted for the discharge? Yes ☐ No ☒ if "yes," number: _____
- Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes ☐ No ☒ if "yes," date and tracking #: _____
- Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes ☒ No ☐
- For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes ☐ No ☒

e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes ☐ No ☒ If "yes," please list:

- site identification # assigned by the state of NH or MA: _____
- permit or license # assigned: _____
- state agency contact information: name, location, and telephone number: _____

f) Is the site/facility covered by any other EPA permit, including:

- multi-sector storm water general permit? Y ☐ N ☒ if Y, number: _____
- phase I or II construction storm water general permit? Y ☐ N ☒ if Y, number: _____
- individual NPDES permit? Y ☐ N ☒ if Y, number: _____
- any other water quality related permit? Y ☐ N ☒ if Y, number: _____

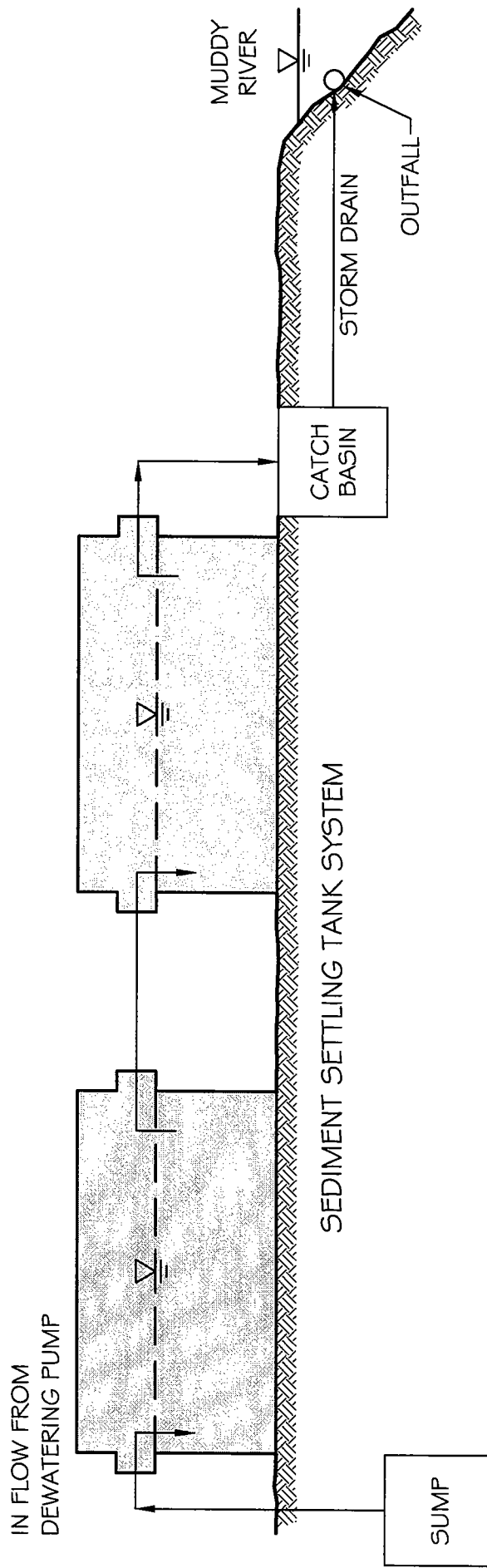
2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage:		
Construction dewatering for construction of new parking garage and School of Management building. Most of the construction will occur between 5/1/2006 and 12/1/2007. However, minor dewatering may occur between 11/14/2005 and 5/1/2006 during utility relocation activities prior to construction.		
b) Provide the following information about each discharge:	1) Number of discharge points: 2 alternate points	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow <u>0.22</u> Average flow <u>.078</u> Is maximum flow a design value? Y <input type="checkbox"/> N <input checked="" type="checkbox"/> For average flow, include the units and appropriate notation if this value is a design value or estimate if not available. Average flow = 0.078 cfs (35 gpm) (estimated value based on maximum excavation). Average flow will be much less during preliminary utility excavation activities.
3) Latitude and longitude of each discharge within 100 feet: pt.1: long. <u>71.10</u> lat. <u>42.34</u> ; pt.2: long. <u>71.10</u> lat. <u>42.34</u> ; pt.3: long. _____ lat. _____ ; pt.4: long. _____ lat. _____ ; pt.5: long. _____ lat. _____ ; pt.6: long. _____ lat. _____ ; pt.7: long. _____ lat. _____ ; pt.8: long. _____ lat. _____ ; etc.		

4) If hydrostatic testing, total volume of the discharge (gals):	5) Is the discharge intermittent <input checked="" type="checkbox"/> or seasonal <input type="checkbox"/> Is discharge ongoing Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> ?	**
c) Expected dates of discharge (mm/dd/yy): start 11/01/05 end 12/01/07		
d) Please attach a line drawing or flow schematic showing water flow through the facility including: 1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s).		

SEE ATTACHED SCHEMATIC

** Note that discharge will be intermittent during preliminary utility work from 11/14/05 to 5/1/06, then is anticipated to be more or less continuous during excavation of the footprint of the building between 5/1/06 and 12/1/07.



McPHAIL ASSOCIATES, INC.
Geotechnical Engineers
30 Norfolk Street
Cambridge, MA 02139
617/868-1420
617/868-1423 (Fax)

SIMMONS COLLEGE SCHOOL OF MANAGEMENT		MASSACHUSETTS	
BOSTON		SCHEMATIC OF WATER FLOW	
FOR			
SIMMONS COLLEGE			
BY			
McPHAIL ASSOCIATES, INC.			
CONSULTING GEOTECHNICAL ENGINEERS			
Date: OCTOBER 2005	Dwn: I.J.M.	Chkd: E.H.V.	Scale: N.T.S.
Project No:		4371	

3. Contaminant information. In order to complete this section, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for **all** of the parameters listed in Appendix III. Historical data, (i.e., data taken no more than 2 years prior to the effective date of the permit) may be used if obtained pursuant to: i. Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E"); ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, provided the data was analyzed with test methods that meet the requirements of this permit. Otherwise, a new sample shall be taken and analyzed.

a) Based on the analysis of the sample(s) of the untreated influent, the applicant must check the box of the sub-categories that the potential discharge falls within.

Gasoline Only	VOC Only	Primarily Metals	Urban Fill Sites	Contaminated Sumps	Mixed Contaminants	Aquifer Testing
Fuel Oils (and Other Oils) only	VOC with Other Contaminants	Petroleum with Other Contaminants	Listed Contaminated Sites <input checked="" type="checkbox"/>	Contaminated Dredge Condensates	Hydrostatic Testing of Pipelines/Tanks	Well Development or Rehabilitation

b) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids		<input checked="" type="checkbox"/>	1	grab	2540D	25.0	280			
2. Total Residual Chlorine	<input checked="" type="checkbox"/>									
3. Total Petroleum Hydrocarbons		<input checked="" type="checkbox"/>	1	grab	8100M	0.13	340			
4. Cyanide	<input checked="" type="checkbox"/>									
5. Benzene	<input checked="" type="checkbox"/>		1	grab	8260B	0.50	ND			
6. Toluene	<input checked="" type="checkbox"/>		1	grab	8260B	0.75	ND			
7. Ethylbenzene	<input checked="" type="checkbox"/>		1	grab	8260B	0.50	ND			
8. (m,p,o) Xylenes	<input checked="" type="checkbox"/>		1	grab	8260B	1.0	ND			
9. Total BTEX ⁴	<input checked="" type="checkbox"/>		1	grab	8260B	1.0	ND			

NOTE: SAMPLES OBTAINED FROM MONITORING WELLS

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide (1,2-Dibromo-methane)	✓									
11. Methyl-tert-Butyl Ether (MtBE)	✓		1	GRAB	8260B	1.0	ND			
12. tert-Butyl Alcohol (TBA)	✓									
13. tert-Amyl Methyl Ether (TAME)	✓		1	GRAB	8260B	2.0	ND			
14. Naphthalene	✓		1	GRAB	8260B	2.5	ND			
15. Carbon Tetra-chloride	✓		1	GRAB	8260B	0.50	ND			
16. 1,4 Dichlorobenzene	✓		1	GRAB	8260B	2.5	ND			
17. 1,2 Dichlorobenzene	✓		1	GRAB	8260B	2.5	ND			
18. 1,3 Dichlorobenzene	✓		1	GRAB	8260B	2.5	ND			
19. 1,1 Dichloroethane	✓		1	GRAB	8260B	0.75	ND			
20. 1,2 Dichloroethane	✓		1	GRAB	8260B	0.50	ND			
21. 1,1 Dichloroethylene	✓		1	GRAB	8260B	0.50	ND			
22. cis-1,2 Dichloro-ethylene	✓		1	GRAB	8260B	0.50	ND			
23. Dichloromethane (Methylene Chloride)	✓		1	GRAB	8260B	5.0	ND			
24. Tetrachloroethylene	✓		1	GRAB	8260B	0.50	ND			

NOTE: SAMPLES OBTAINED FROM MONITORING WELLS

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane	✓		1	GRAB	8260B	0.50	ND			
26. 1,1,2 Trichloroethane	✓		1	GRAB	8260B	0.75	ND			
27. Trichloroethylene	✓		1	GRAB	8260B	0.50	ND			
28. Vinyl Chloride	✓		1	GRAB	8260B	1.0	ND			
29. Acetone			1	GRAB	8260B	5.0	ND			
30. 1,4 Dioxane	✓		1	GRAB	8260B	250	ND			
31. Total Phenols		✓	1	GRAB	625	24	6.8			
32. Pentachlorophenol	✓		1	GRAB	625	24	ND			
33. Total Phthalates ⁵ (Phthalate esters)	✓		1	GRAB	625	6.1	ND			
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	✓		1	GRAB	625	12	ND			
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	✓		1	GRAB	625	6.1	ND			
a. Benzo(a) Anthracene	✓		1	GRAB	625	6.1	ND			
b. Benzo(a) Pyrene	✓		1	GRAB	625	6.1	ND			
c. Benzo(b) Fluoranthene	✓		1	GRAB	625	6.1	ND			
d. Benzo(k) Fluoranthene	✓		1	GRAB	625	6.1	ND			
e. Chrysene	✓		1	GRAB	625	6.1	ND			

NOTE: SAMPLES OBTAINED FROM MONITORING WELLS

⁵The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
f. Dibenzo(a,h)anthracene	✓		1	GRAB		6.1				
g. Indeno(1,2,3-cd)Pyrene	✓		1	GRAB	625	6.1	ND			
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	✓		1	GRAB	625	6.1	ND			
h. Acenaphthene	✓		1	GRAB	625	6.1	ND			
i. Acenaphthylene	✓		1	GRAB	625	6.1	ND			
j. Anthracene	✓		1	GRAB	625	6.1	ND			
k. Benzo(ghi) Perylene	✓		1	GRAB	625	6.1	ND			
l. Fluoranthene	✓		1	GRAB	625	6.1	ND			
m. Fluorene	✓		1	GRAB	625	6.1	ND			
n. Naphthalene-	✓		1	GRAB	625	6.1	ND			
o. Phenanthrene	✓		1	GRAB	625	6.1	ND			
p. Pyrene	✓		1	GRAB	625	6.1	ND			
37. Total Polychlorinated Biphenyls (PCBs)	✓		1	GRAB	608	2.44	ND			
38. Antimony		✓	1	GRAB	6020A	0.5	3.5			
39. Arsenic	✓		1	GRAB	6020A	0.5	ND			
40. Cadmium		✓	1	GRAB	6020A	0.5	0.9			
41. Chromium III			1	GRAB-TOTAL	6020A	-0.5	18.1			
42. Chromium VI		✓	1							

NOTE: SAMPLES OBTAINED FROM MONITORING WELLS

Remediation General Permit - Notice of Intent

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
43. Copper		✓	1	GRAB	6020A	0.5	68			
44. Lead		✓	1	GRAB	6020A	0.5	1020			
45. Mercury		✓	1	GRAB	6020A	0.2	5.6			
46. Nickel		✓	1	GRAB	6020A	0.5	8.6			
47. Selenium		✓	1	GRAB	6020A	1	2			
48. Silver	✓		1	GRAB	6020A	0.5	ND			
49. Zinc		✓	1	GRAB	6020A	5	784.5			
50. Iron	✓									
Other (describe):										

c) For discharges where **metals** are believed present, please fill out the following:

<p><i>Step 1:</i> Do any of the metals in the influent have a reasonable potential to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y <input checked="" type="checkbox"/> N <input type="checkbox"/></p>	<p>If yes, which metals? Arsenic, cadmium copper, lead, mercury, zinc</p>
<p><i>Step 2:</i> For any metals which have reasonable potential to exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c) (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metals: arsenic, cadmium, copper, lead, mercury, zinc</p> <p>DF: 5-50</p>	<p>Look up the limit calculated at the corresponding dilution factor in Appendix IV. Do any of the metals in the influent have the potential to exceed the corresponding effluent limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y <input checked="" type="checkbox"/> N <input type="checkbox"/> If "Yes," list which metals: copper, lead, mercury, zinc</p>

NOTE: SAMPLES OBTAINED FROM MONITORING WELLS

4. Treatment system information. Please describe the treatment system using separate sheets as necessary, including:

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:

The discharge will be passed through two settling tanks, each 5,000 gallons in capacity, in series. A test of the effluent will be completed prior to discharge into the storm drain system, and additional filtration and/or metal treatment will be added to meet permit limits

b) Identify each applicable treatment unit (check all that apply):	Frac. tank	Air stripper	Oil/water separator	Equalization tanks	Bag filter	GAC filter
Chlorination		Dechlorination	Other (please describe): An ionization tank will be added if pre-discharge testing of the effluent indicates an exceedance of dilution range concentrations for metals	✓	✓ **	

c) Proposed **average** and **maximum flow rates** (gallons per minute) for the discharge and the **design flow rate(s)** (gallons per minute) of the treatment system:
Average flow rate of discharge 35 Maximum flow rate of treatment system 100 Design flow rate of treatment system N/A

d) A description of chemical additives being used or planned to be used (attach MSDS sheets):

None

5. Receiving surface water(s). Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:

Direct	Within facility	Storm drain	River/brook	Wetlands	Other (describe):
		✓			

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:
The construction dewatering discharge will be pumped to the Muddy River either through a 24-inch storm drain flowing north-northeast down Palace Road and out to Discharge Outfall Number D0 047 or through a 36-inch storm drain flowing north-northeast down Avenue Louis Pasteur, then northwest along The Fenway, then out to outfall DO 045.

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:
 1. For multiple discharges, number the discharges sequentially.
 2. For indirect discharges, indicate the location of the discharge to the indirect conveyance and the discharge to surface water
 The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.

d) Provide the state water quality classification of the receiving water B.

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 6 cfs
 Please attach any calculation sheets used to support stream flow and dilution calculations. See Groundwater Treatment Section of attached report

f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes No ✓ If yes, for which pollutant(s)?

Is there a TMDL? Yes No ✓ If yes, for which pollutant(s)?
 Bacteria (scheduled for completion in 2004)

6. Results of Consultation with Federal Services: Please provide the following information according to requirements of Part I.B.4 and Appendices II and VII.

a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes No ✓
 Has any consultation with the federal services been completed? No ✓ or is consultation underway? No ✓
 What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service? (check one):
 a "no jeopardy" opinion? or written concurrence on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?

b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge?
 Yes No ✓ Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes No ✓

7. Supplemental information. :

Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

See attached report, "Notice of Intent for Construction Dewatering Discharge Under RGP MA910000"

8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility/Site Name: Simmons College ~~School of Management~~

Operator signature:



Title: DIRECTOR OF FACILITIES

Date: 11/8/05

Boston Water and Sewer Commission's Dewatering Discharge Permit Application

Facility/Business Name: Simmons College School of Management

Mailing Address: 300 The Fenway, Boston, MA 02115

Authorized Representative concerning information provided herein:

Name: Ms. Janet Fishtein

Title: _____

Phone #: 617-521-2278

Beeper #: _____

Fax #: 617-521-3170

Owner of property being dewatered: Simmons College

Location of Discharge:

Street The Fenway

Neighborhood Fenway

Phone # _____

Discharge is to a: Sanitary Sewer

Combined Sewer

Storm Drain

(Circle One)

BWSC Outfall #: DO-045 or DO-047

Receiving Waters: Muddy River

Temporary Discharges: November 2005 To December 2007 (Provide anticipated dates of discharge)

☐ Groundwater Remediation ☐ Tank Removal/Installation ☒ Foundation Excavation

☐ Utility/Manhole Pumping ☐ Test Pit ☐ Trench Excavation
Soil Excavation

☐ Accum. Surface Water ☐ Hydrogeologic Testing ☒ Other _____

Permanent Discharges:

☐ Foundation Drainage

☐ Crawl Space/Footing Drain.

☐ Accumulated Surface Water

☐ Non-contact/Uncontaminated Cooling

☐ Non-contact/Uncontaminated Process

☐ Other _____

1. Attach a Site Plan showing the source of the discharge and the location of the point of discharge (i.e. the sewer pipe or catch basin). Include meter type, meter number, size, make and start reading. All discharges are assessed current sewer charges.
2. If discharging to a sanitary or combined sewer, attach a copy of MWRA's Sewer Use Discharge permit or application.
3. If discharging to a separate storm drain attached a copy of EPA's NPDES Permit or NOI application, or NPDES Permit exclusion letter for the discharge, as well as other relevant information.
4. Dewatering Drainage Permit will be denied or revoked if applicant fails to obtain the necessary permits from MWRA or EPA.

Submit to: Mr. Francis M. McLaughlin Phone: 617-989-7000
Manager, Engineering Customer Services Fax: 617-989-7716
Boston Water and Sewer Commission
980 Harrison Ave.
Boston, MA 02119

BWSC Use Only

Date Received: _____ Comments: _____

14.3



SIMMONS COLLEGE SCHOOL OF MANAGEMENT MASSACHUSETTS BOSTON BOSTON WATER & SEWER STORM DRAINAGE & OUTFALLS	FOR	SIMMONS COLLEGE		Scale: N.T.S. Date: 11/27/05
	BY	MCPHAIL ASSOCIATES, INC., CONSULTING GEOTECHNICAL ENGINEERS		
Date: NOVEMBER 2005		Drawn: J.L.M.	Check: E.H.V.	Project No.:

Date: NOVEMBER 2005	Dent: I.J.M.	Chkd: C.H.V.	Scale: N.T.S.
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Geotechnical Engineers

APPENDIX C

Soil Boring Logs

CARR-DEE CORP.

37 LINDEN STREET

P.O. BOX 67

MEDFORD, MA 02155-0001

Telephone (617) 391-4500

To: McPHAIL ASSOCIATES, INC. 30 NORFOLK ST., CAMBRIDGE, MA.

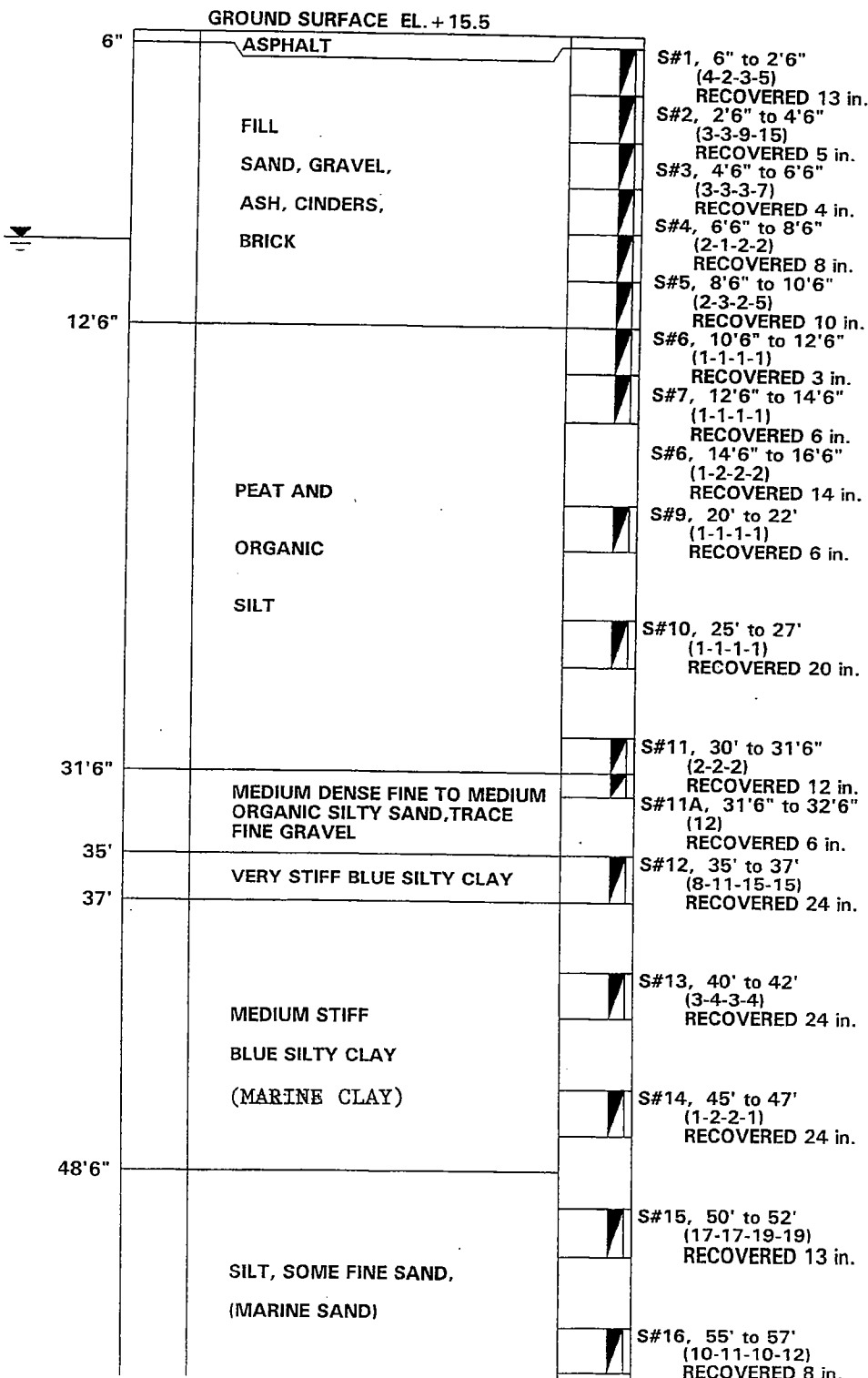
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 101



All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

CARR-DEE CORP.

37 LINDEN STREET

P.O. BOX 67

MEDFORD, MA 02155-0001

Telephone (617) 391-4500

To: McPHAIL ASSOCIATES, INC. 30 NORFOLK ST., CAMBRIDGE, MA.

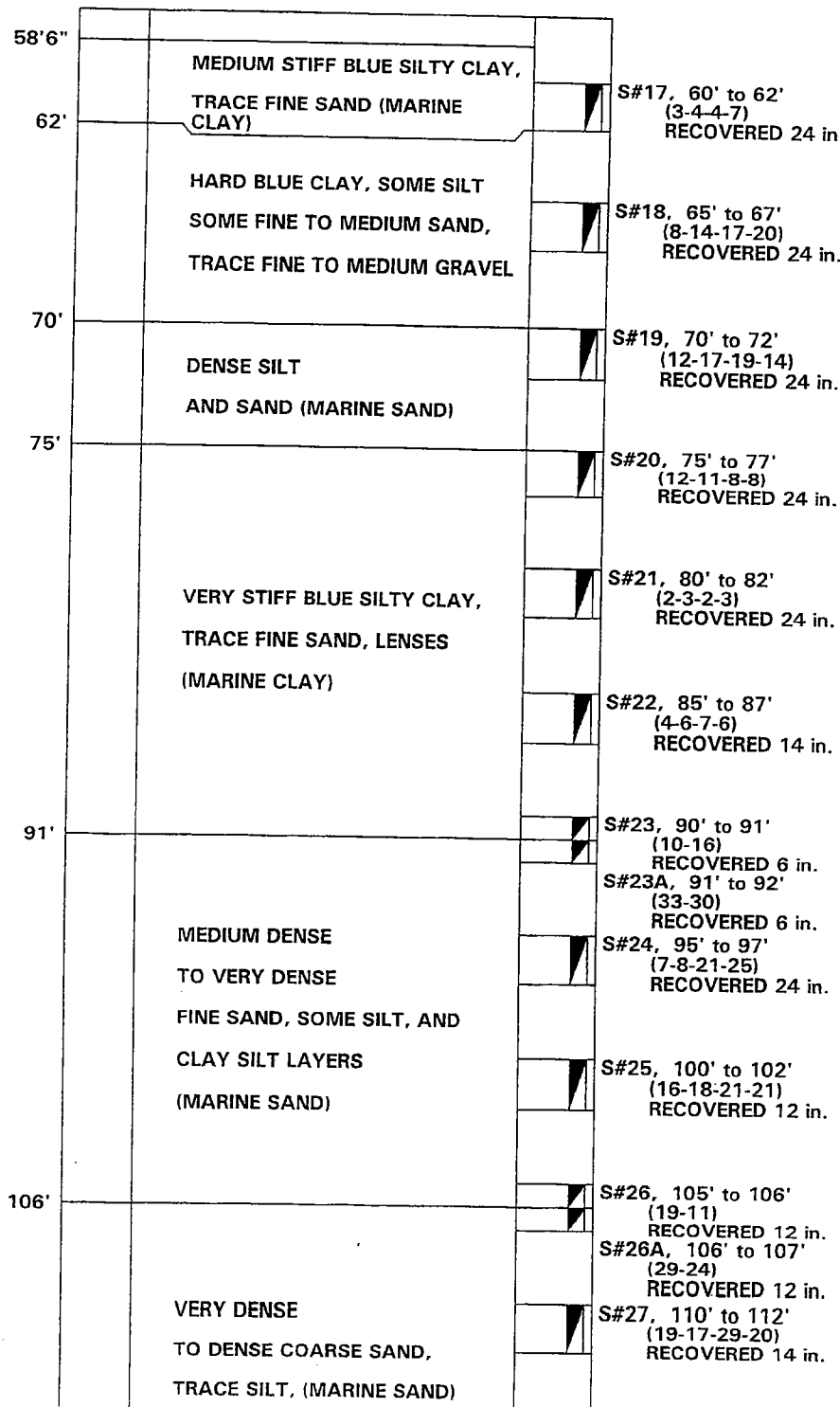
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 101



All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

CARR-DEE CORP.

37 LINDEN STREET

P.O. BOX 67

MEDFORD, MA 02155-0001

Telephone (617) 391-4500

To: MCPHAIL ASSOCIATES, INC. 30 NORFOLK ST., CAMBRIDGE, MA.

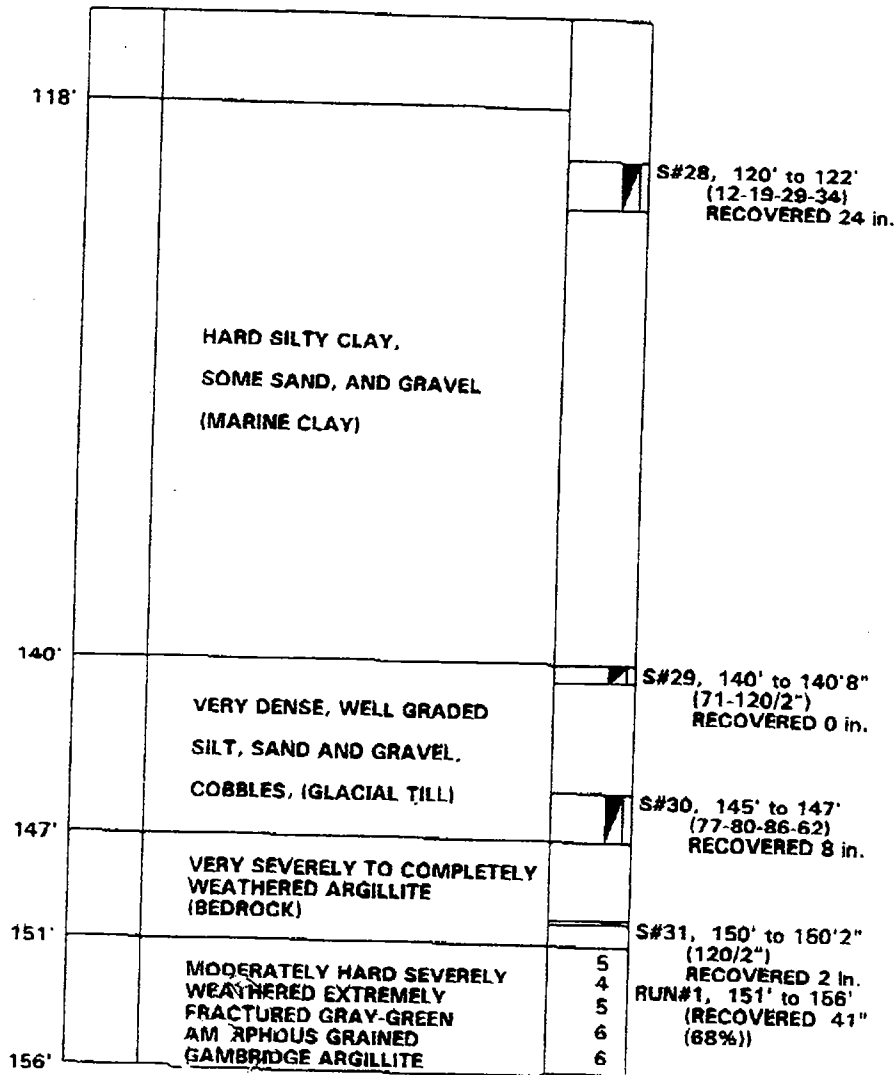
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 101



WATER LEVEL 9'
 SIZE OF CASING HW LENGTH 35'0"
 SIZE OF ROCK CORE NX LENGTH 6'0"
 DRILLER: GERALD SMITH. INSPECTOR: TOM CORMINCAN
 DATE STARTED & COMPLETED 7-5-8-2005

All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

CARR-DEE CORP.

37 LINDEN STREET

P.O. BOX 67

MEDFORD, MA 02155-0001

Telephone (617) 391-4500

To: McPHAIL ASSOCIATES, INC. 30 NORFOLK ST., CAMBRIDGE, MA.

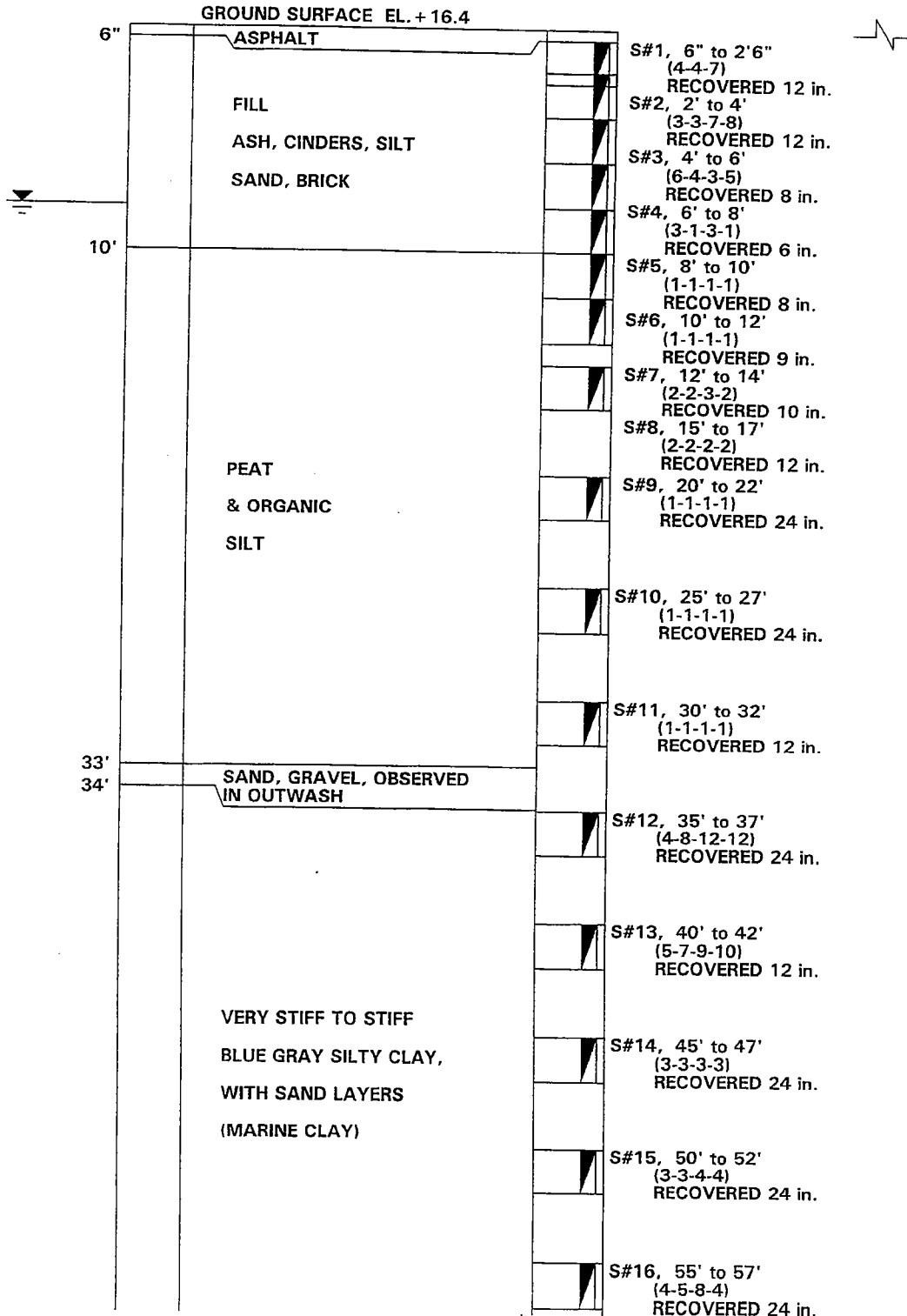
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 102



All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

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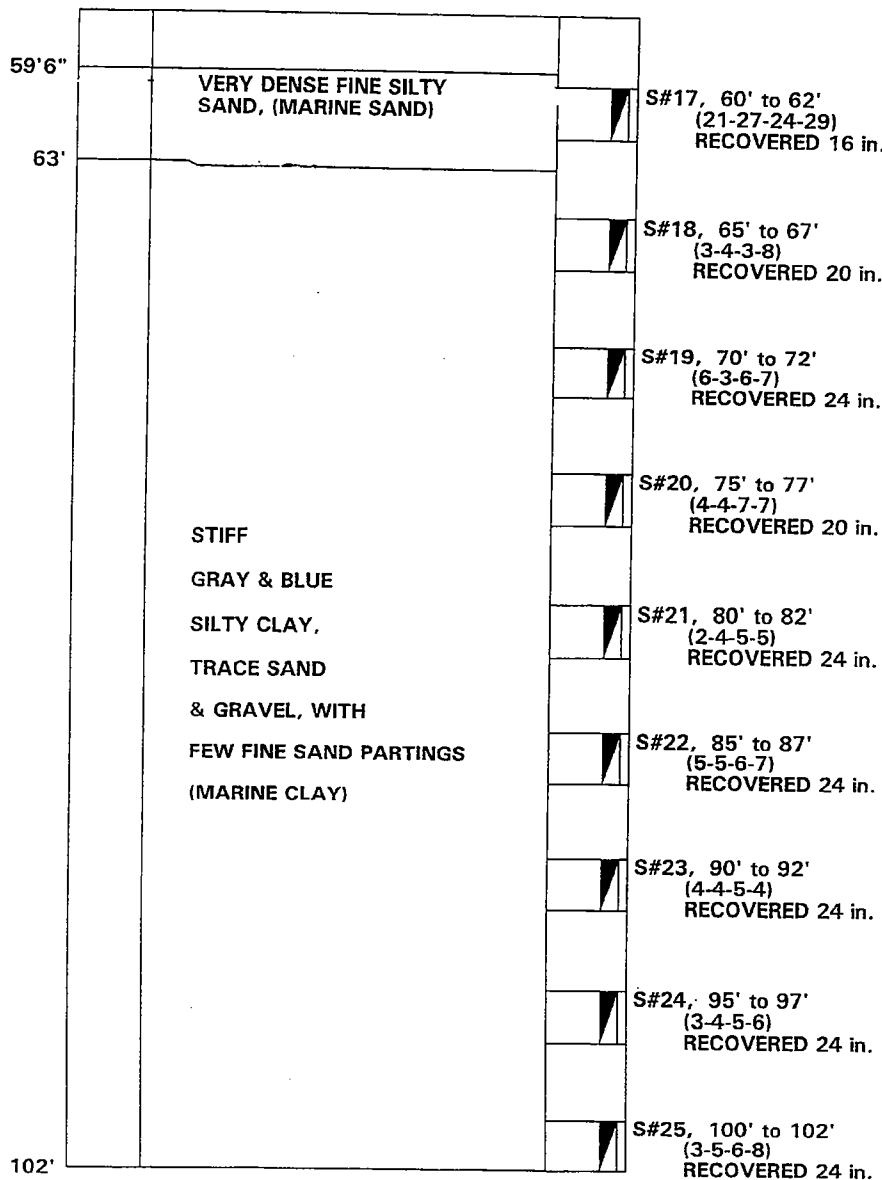
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 102



WATER LEVEL 8'
 SIZE OF CASING NW LENGTH 35'0"
 DRILLER: NEIL SMITH, INSPECTOR: TOM CORMICAN
 DATE STARTED & COMPLETED 7-20-21-2005

All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

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Date: 7-28-2005

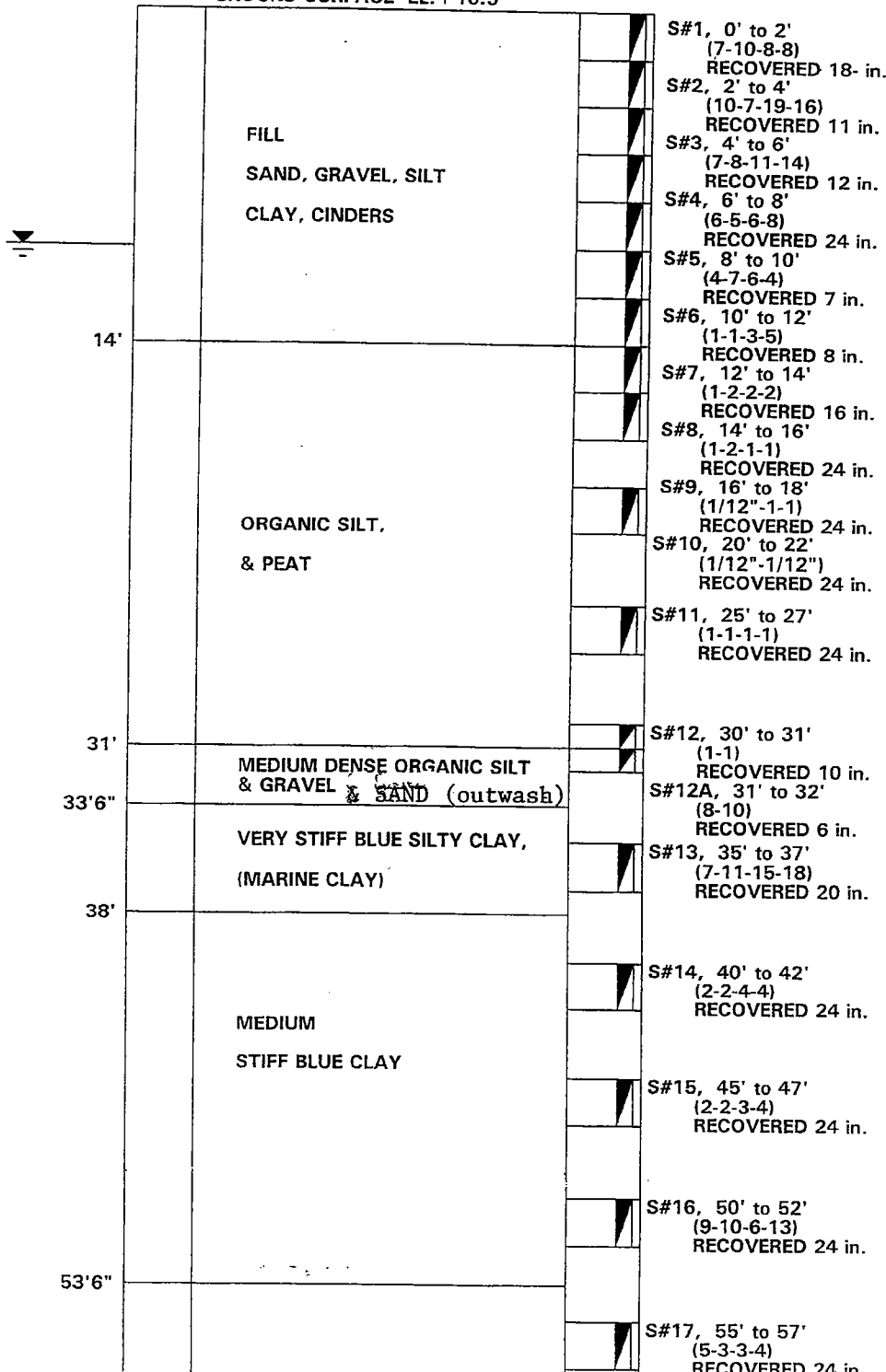
Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 103

GROUND SURFACE EL. +16.5



All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

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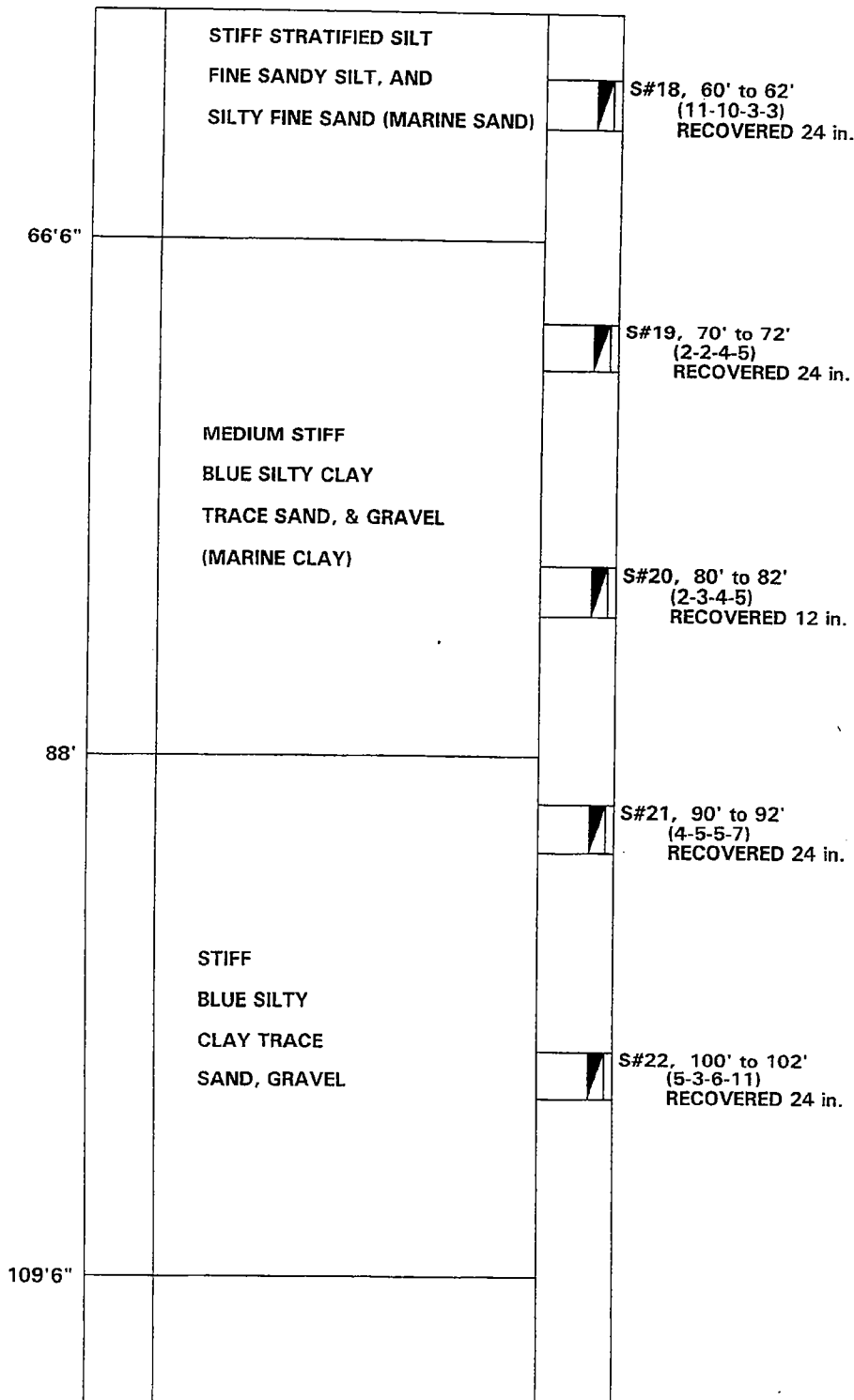
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 103



All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

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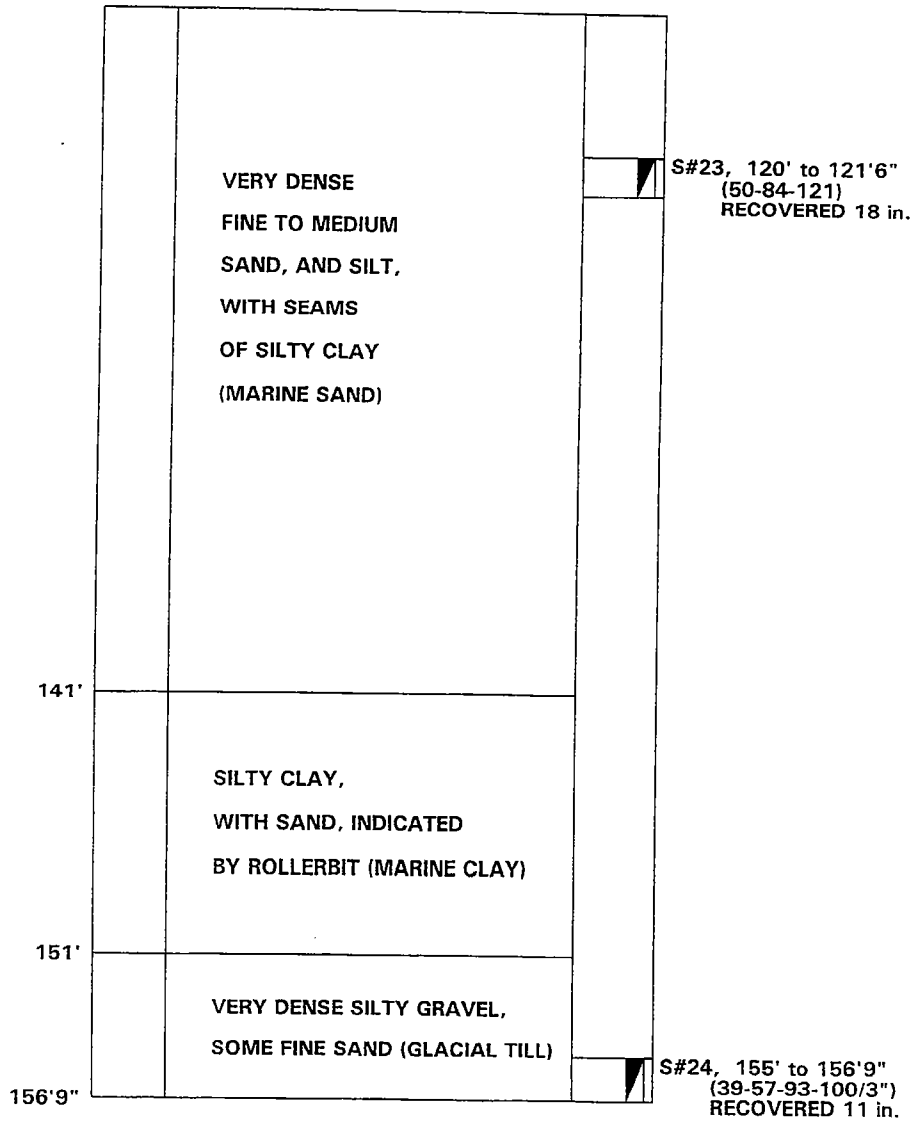
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 103



WATER LEVEL 10'

SIZE OF CASING AUGER 2-1/4" I.D. LENGTH 10'0"

SIZE OF CASING NW LENGTH 35'0"

DRILLER: JOSEPH DE SIMONE, INSPECTOR: TOM CORMICAN

DATE STARTED & COMPLETED 7-20-2005

All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (\pm). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (\pm).

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Date: 7-28-2005

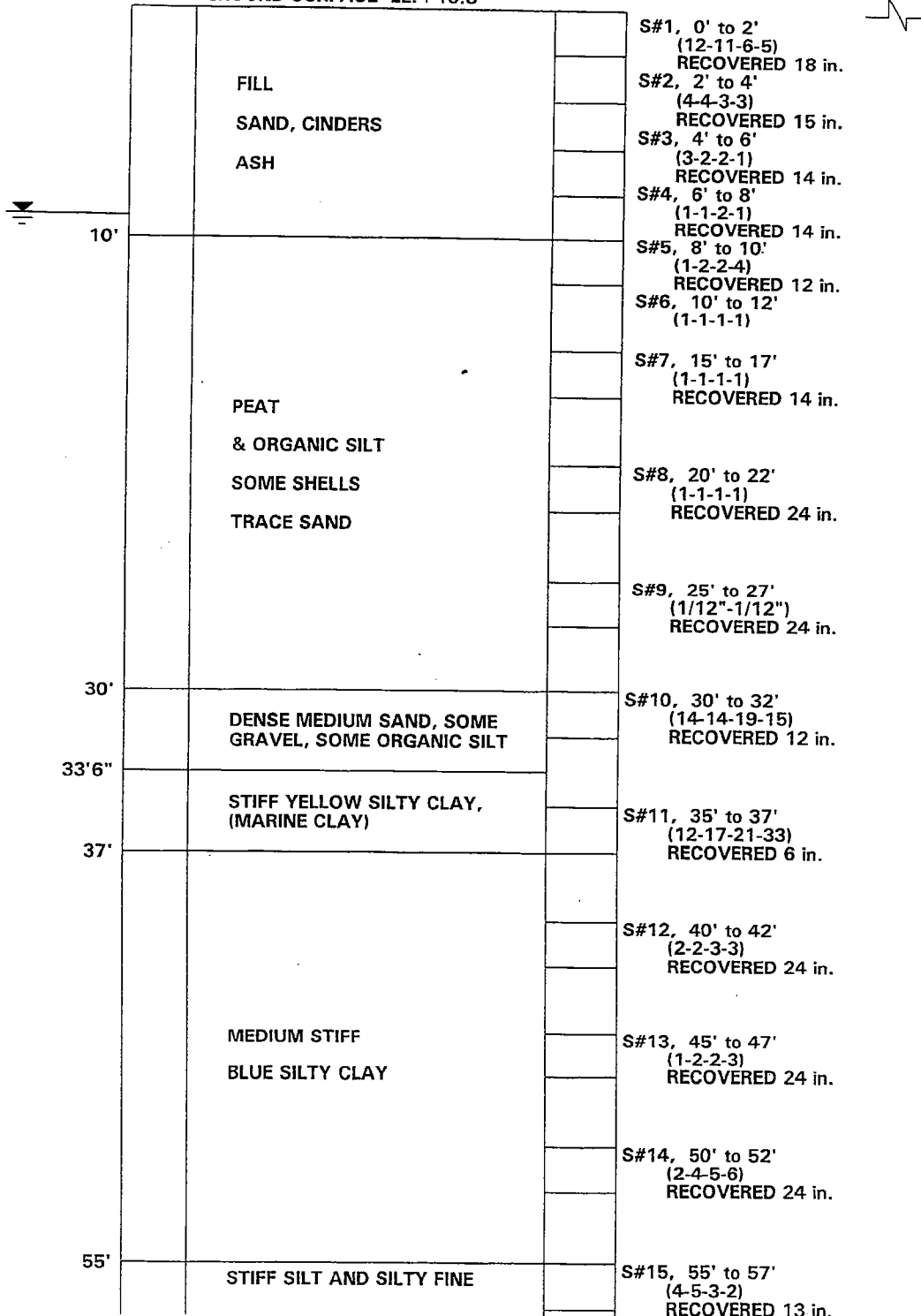
Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 104

GROUND SURFACE EL. +16.8



All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

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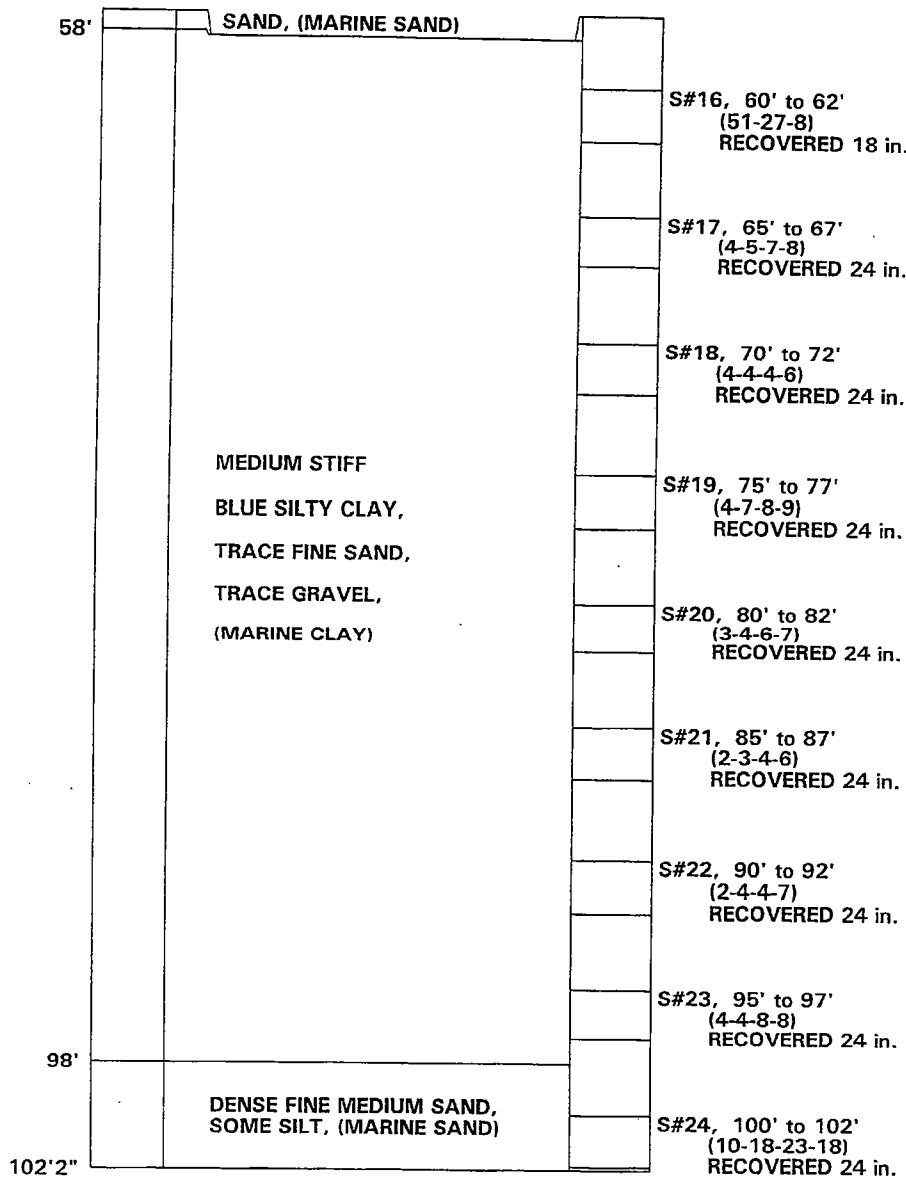
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 104



WATER LEVEL 9'

SIZE OF CASING NW LENGH 30'0"

DRILLER: JOSEPH DE SIMONE, INSPECTOR: TOM CORMICAN

DATE STARTED & COMPLETED 7-19-2005

All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (\pm). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (\pm).

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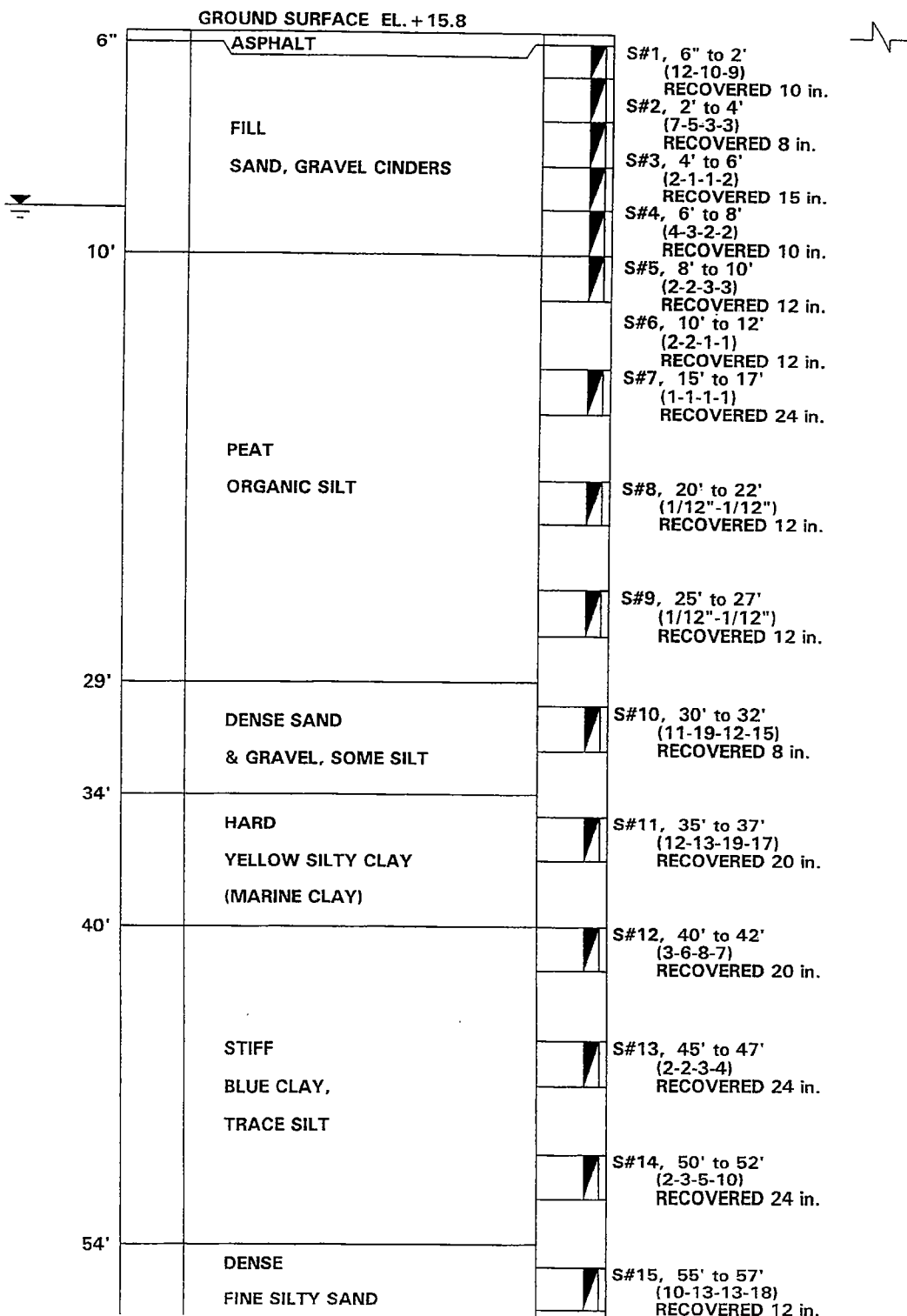
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 105



All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

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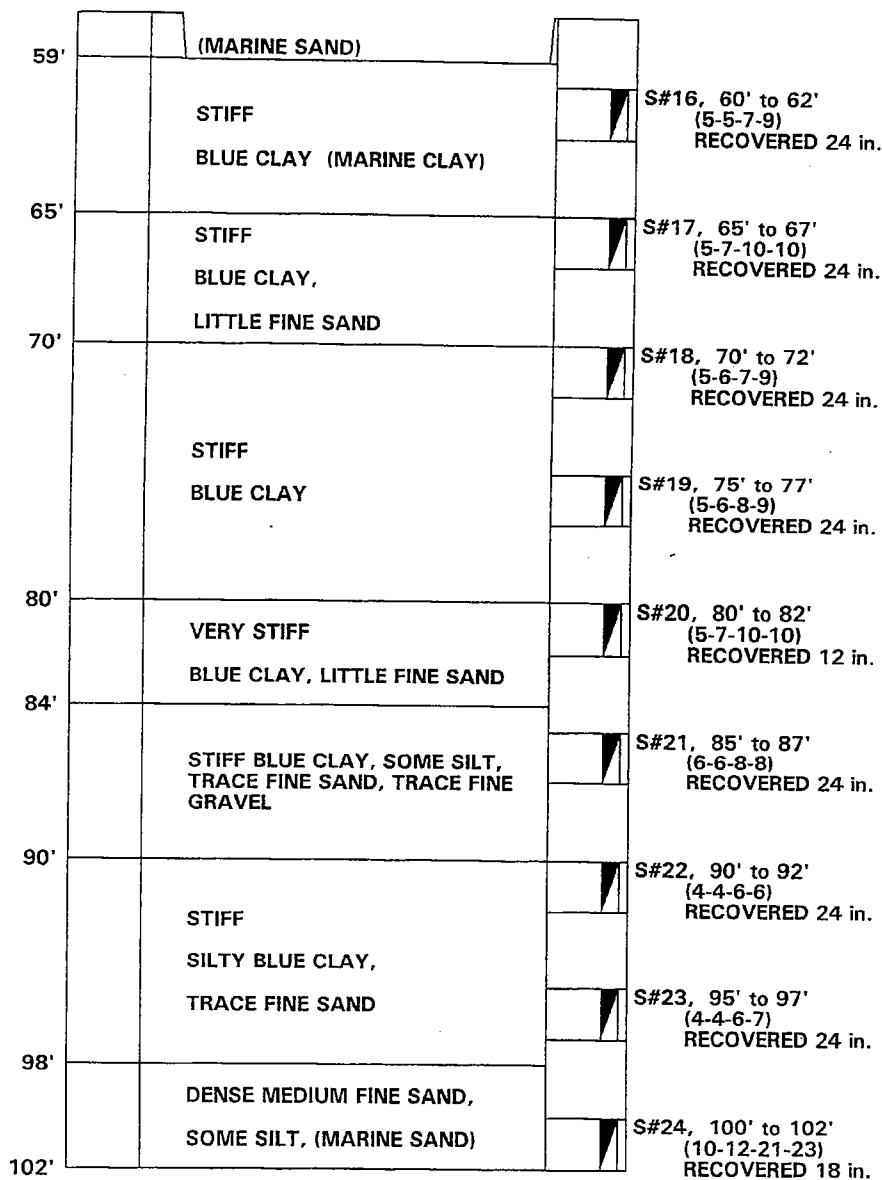
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 105



WATER LEVEL 8'

SIZE OF AUGERS 3-3/4" I.D. LENGTH 10'0"

SIZE OF CASING NW LENGTH 35'0"

DRILLER: NEIL SMITH, & R. LONG, INSPECTOR: ROB COLLINS

DATE STARTED & COMPLETED 7-25-27-2005

All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

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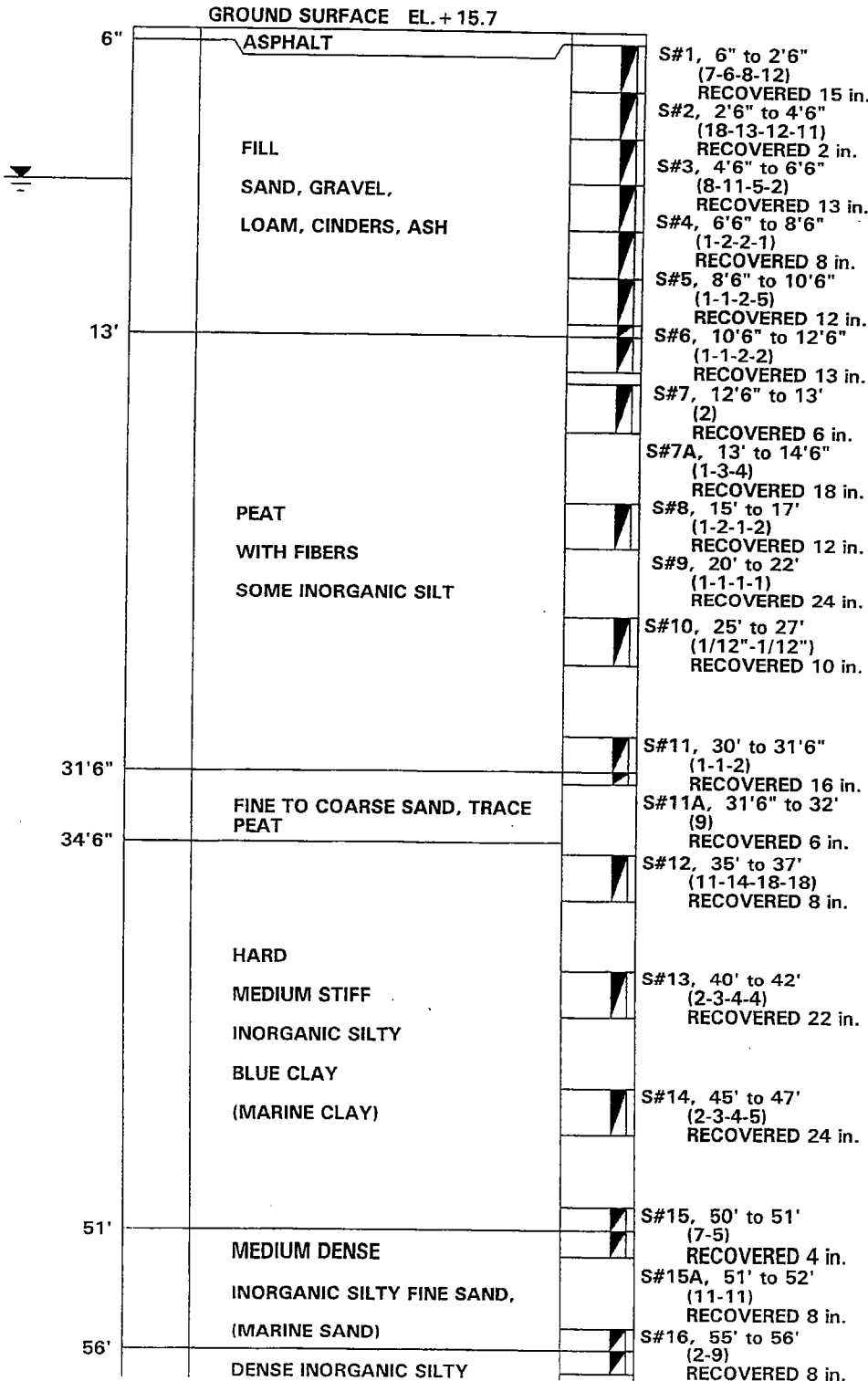
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 106



All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

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To: McPHAIL ASSOCIATES, INC. 30 NORFOLK ST., CAMBRIDGE, MA.

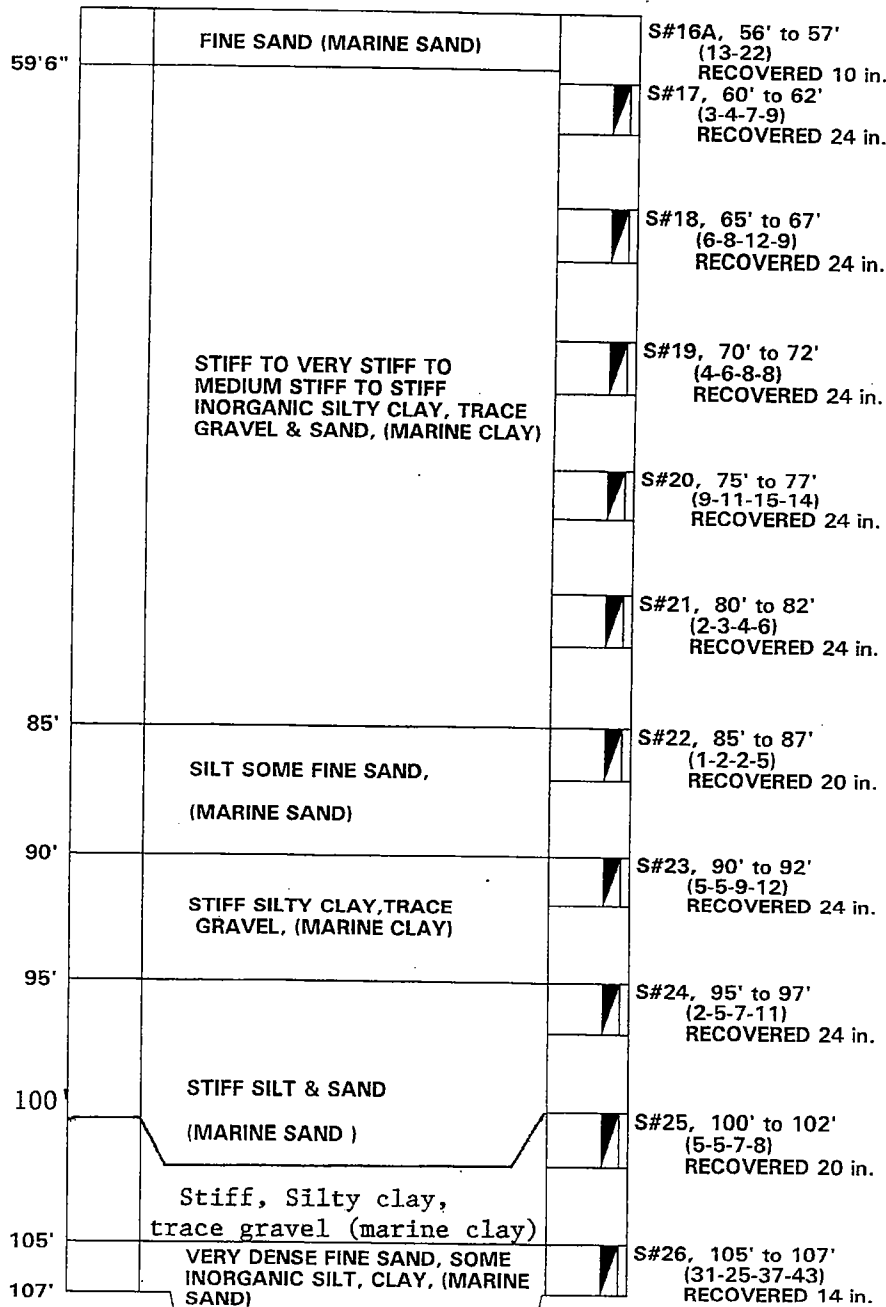
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 106



WATER LEVEL 6'6"

SIZE OF AUGERS 2-1/4" I.D. LENGTH 10'0"

SIZE OF CASING NW LENGTH 35'0"

DRILLER: RENE DE SIMONE, INSPECTOR: TON CORMICAN

DATE STARTED & COMPLETED 6-30-7-1-2005

All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches(±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

Phone: (603) 437-1610

New Hampshire Boring, Inc.
P.O. Box 165
Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-106A		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-26-05		Date End: 08-26-05				Location: See Plan	
Casing: HW Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4"ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
G R O U N D W A T E R O B S E R V A T I O N							
Date:	Depth:		Casing:				Stabilization Period Upon Completion
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	6" - 2'6"	24"	7"	5-6-5-8	3" (Fill)	ASPHALT
-	S-2	2'6" - 4'6"	24"	16"	13-20-16-18	6'6"	Brown to gray, silty sand, some gravel, trace ash and cinders. (FILL)
2'6"							
-	S-3	4'6" - 6'6"	24"	8"	24-8-5-6		Bottom of Exploration= 6'6"
-							
-							
-							
5'0"							
-							
-							
-							
7'6"							
-							
-							
10'0"							
-							
-							
-							
12'6"							
-							
-							
-							
15'0"							
-							
Driller: C. O'Donnell			Helper:			Inspector:	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
P.O. Box 165
Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-106B

Project: Simmons College of Management

Project # G57201

Project Address: 300 The Fenway

City: Boston

State: MA Zip:

Date Start: 08-26-05

Date End: 08-26-05

Location: See Plan

Casing: HW

Sampler:

Casing: 4"ID

Sampler:

Type:

S/S

Size:

1-3/8 in. I.D.

Hammer:

140 lbs.

Fall:

30 in.

GROUNDWATER OBSERVATION

Date:	Depth:	Casing:				Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	-	-	-	-	-	3"	ASPHALT
-	S-1	6" - 2'6"	24"	7"	3-6-11-7	(Fill)	Brown, sand and gravel, trace to some silt, with trace glass, wood, ash and cinders.
-	S-2	2'6" - 4'6"	24"	16"	8-9-10-10		
2'6"							
-							
-							
-	S-3	4'6" - 6'6"	24"	8"	12-5-4-3		
5'0"						6'6"	
-							
-							
-							
7'6"							Bottom of Exploration = 6'6"
-							
-							
-							
-							
10'0"							
-							
-							
-							
-							
12'6"							
-							
-							
-							
15'0"							
-							

Driller: C. O'Donnell	Helper:	Inspector:
Remarks:		
S/#: Sample	PEN: Penetration	REC: Recovery
		S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.

Fax: (603) 437-0034

P.O. Box 165

Derry, NH 03038

E-Mail: nhb@nhboring

Boring # B-106C		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-26-05		Date End: 08-26-05				Location: See Plan	
Casing: HW Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
G R O U N D W A T E R O B S E R V A T I O N							
Date:	Depth:		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	-	-	-	-	-	3"	ASPHALT
-	S-1	6" - 2'6"	24"	20"	18-12-21-24	(Fill)	Brown to gray, sand with some silt and gravel with some ash and cinders, trace brick (FILL)
-	S-2	2'6" - 4'6"	24"	7"	18-16-15-25		
2'6"							
-							
-							
-							
-	S-3	4'6" - 6'6"	24"	2"	26-8-3-2		
5'0"							
-							
-							
-						6'6"	Bottom of Exploration = 6'6"
-							
-							
-							
-							
-							
7'6"							
-							
-							
-							
10'0"							
-							
-							
-							
-							
12'6"							
-							
-							
-							
15'0"							
-							
Driller: C. O'Donnell			Helper:			Inspector:	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
P.O. Box 165
Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-106D		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-26-05		Date End: 08-26-05				Location: See Plan	
Casing: HW Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4"ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
G R O U N D W A T E R O B S E R V A T I O N							
Date:	Depth:		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-						3"	ASPHALT
-	S-1	6" - 2'6"	24"		11-12-14-14	(Fill)	
-	S-2	2'6" - 4'6"	24"		5-7-15-13		Brown, SAND, some gravel trace silt, with a trace brick, ash and cinders (FILL)
2'6"							
-							
-							
-	S-3	4'6" - 6'6"	24"		12-9-5-4		
5'0"							
-							
-						6'6"	
-							Bottom of Exploration = 6'6"
7'6"							
-							
-							
-							
10'0"							
-							
-							
-							
12'6"							
-							
-							
-							
15'0"							
-							
Driller: C. O'Donnell			Helper:			Inspector:	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

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P.O. Box 165

Derry, NH 03038

E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-106E

Project: Simmons College of Management

Project # G57201

Project Address: 300 The Fenway

City: Boston

State: MA Zip:

Date Start: 08-26-05

Date End: 08-26-05

Location: See Plan

Casing: HW

Sampler:

Casing: 4"ID

Sampler:

Type:

S/S

Size:

1-3/8 in. I.D.

Hammer:

140 lbs.

Fall:

30 in.

GROUNDWATER OBSERVATION

Date:	Depth:	Casing:				Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	-	-	-	-	-	3"	ASPHALT
-	S-1	6" - 2'6"	24"	-	19-17-12-8	(Fill)	Brown, sand with some silt and gravel and trace to some ash and cinders, and wood (FILL)
-	S-2	2'6" - 4'6"	24"	-	6-9-12-8	-	
2'6"	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	S-3	4'6" - 6'6"	24"	-	6-6-10-5	-	
5'0"	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
7'6"	-	-	-	-	-	6'6"	Bottom of Exploration = 6'6"
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
10'0"	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
12'6"	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
15'0"	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	

Driller: C. O'Donnell

Helper:

Inspector:

Remarks:

S/#: Sample

PEN: Penetration

REC: Recovery

S/C: Strata Change

CARR-DEE CORP.

37 LINDEN STREET

P.O. BOX 67

MEDFORD, MA 02155-0001

Telephone (617) 391-4500

To: McPHAIL ASSOCIATES, INC. 30 NORFOLK ST., CAMBRIDGE, MA.

Date: 7-28-2005

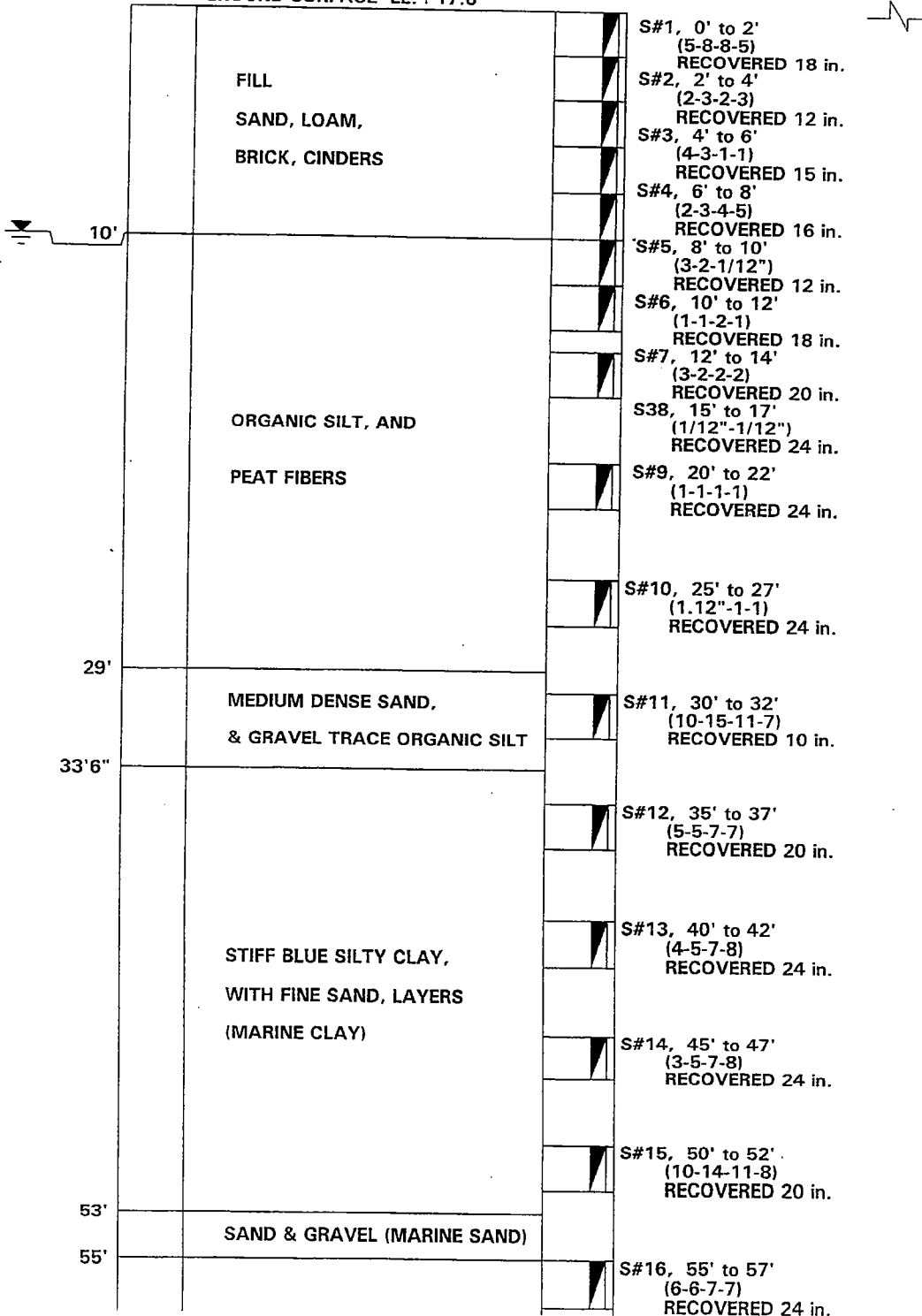
Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 107

GROUND SURFACE EL. + 17.6



All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

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Telephone (617) 391-4500

To: McPHAIL ASSOCIATES, INC. 30 NORFOLK ST., CAMBRIDGE, MA.

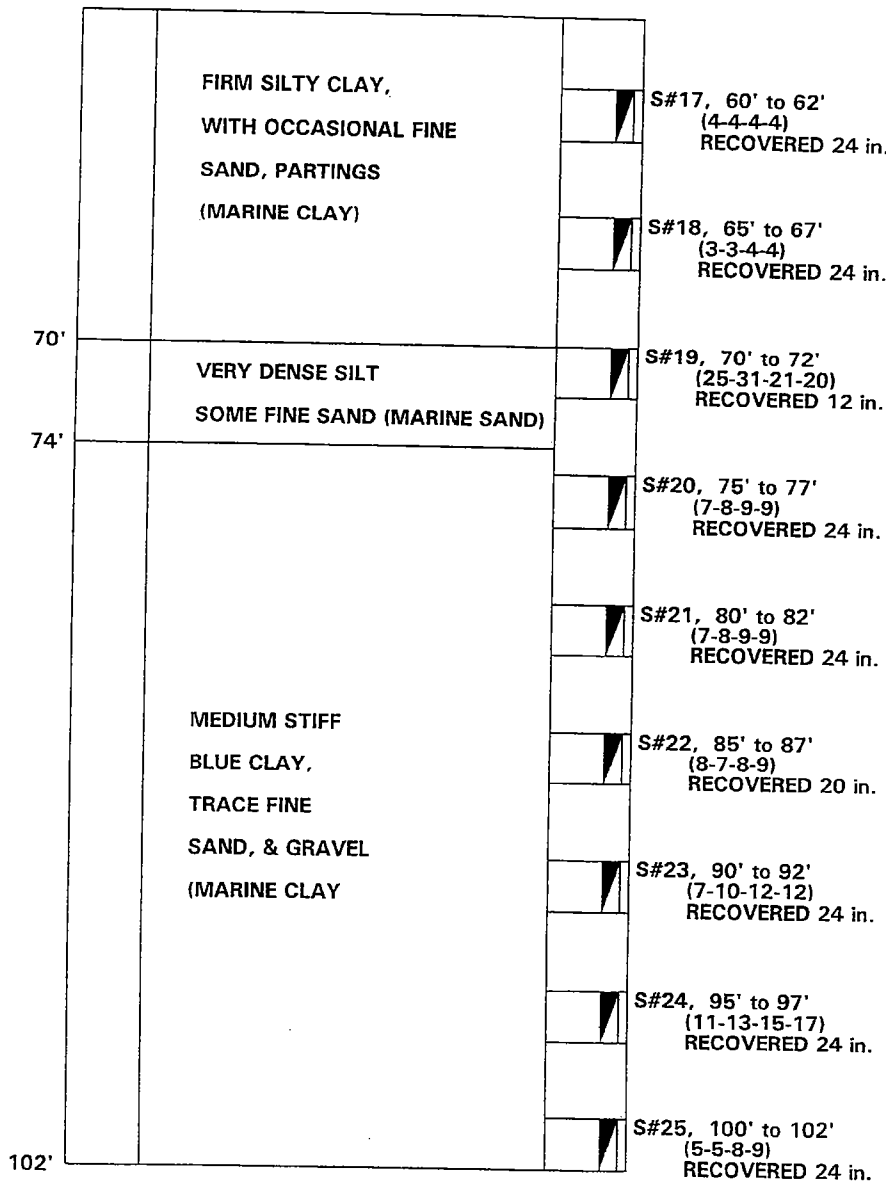
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 107



WATER LEVEL 10'
 SIZE OF CASING NW LENGTH 55'0"
 DRILLER: NEIL SMITH, INSPECTOR: TOM CORMICAN
 DATE STARTED & COMPLETED 7-13-15-2005

All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

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To: McPHAIL ASSOCIATES, INC. 30 NORFOLK ST., CAMBRIDGE, MA.

Date: 7-28-2005

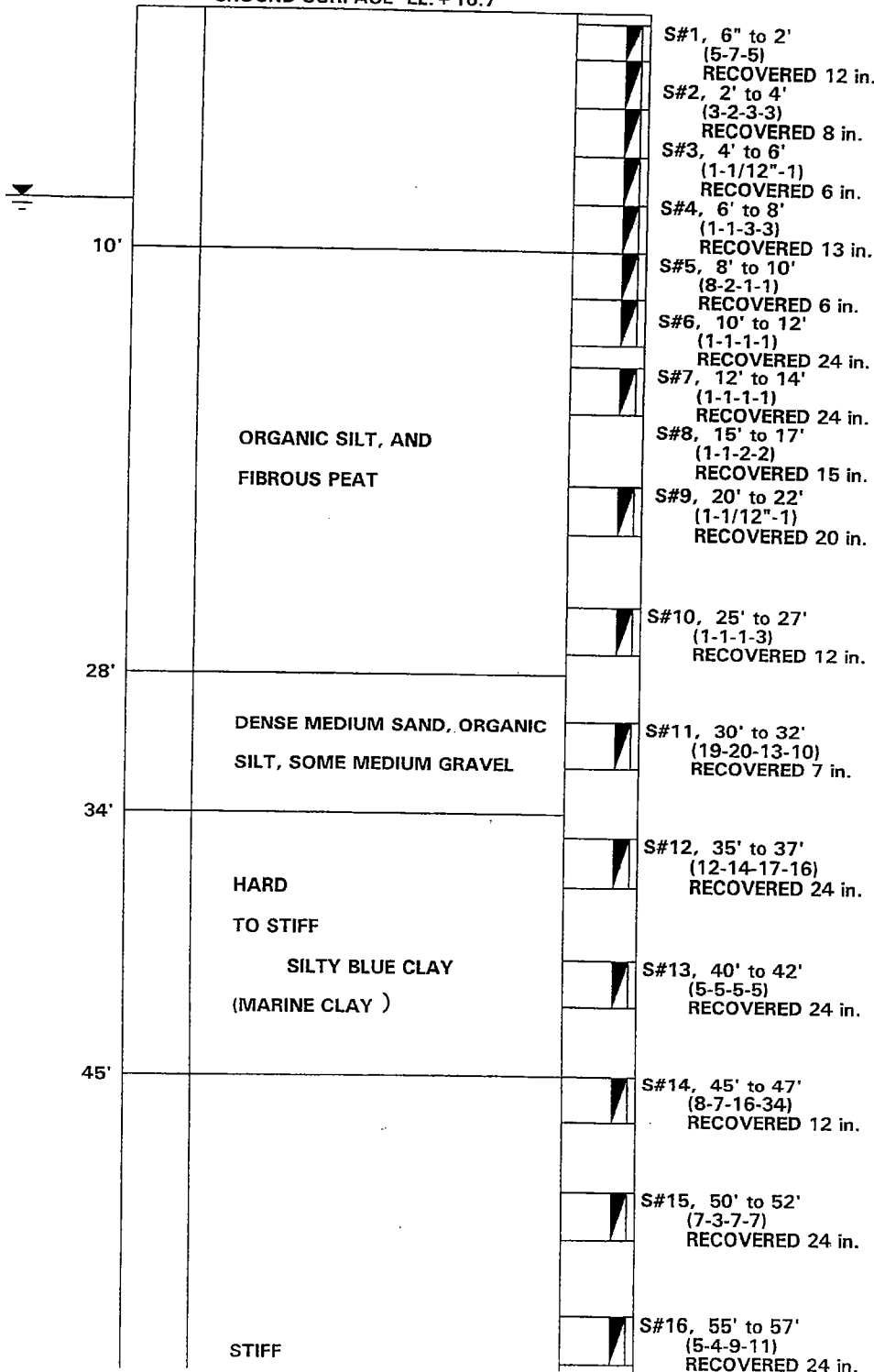
Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 108

GROUND SURFACE EL. + 16.7



All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

CARR-DEE CORP.

37 LINDEN STREET

P.O. BOX 67

MEDFORD, MA 02155-0001

Telephone (617) 391-4500

To: McPHAIL ASSOCIATES, INC. 30 NORFOLK ST., CAMBRIDGE, MA.

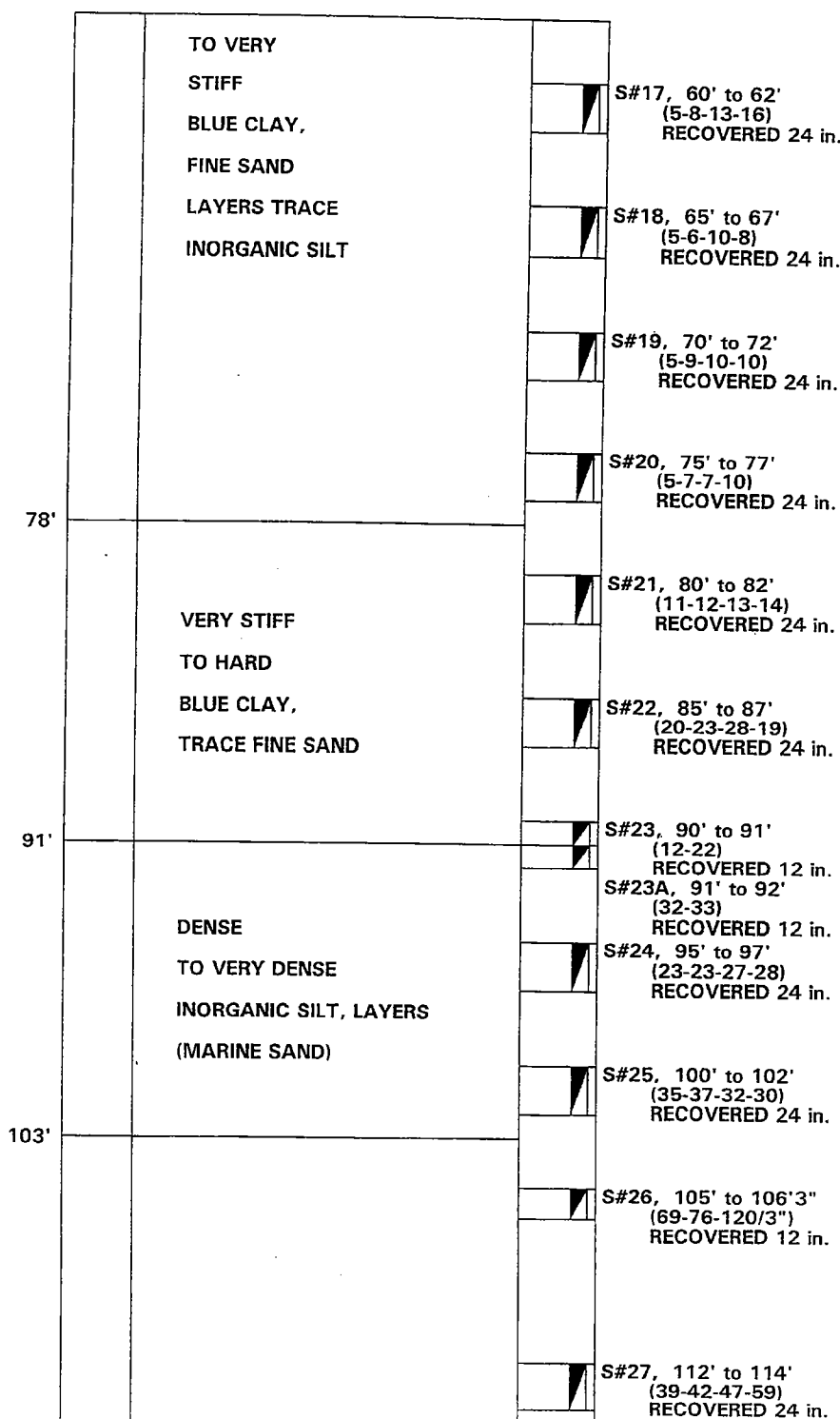
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 108



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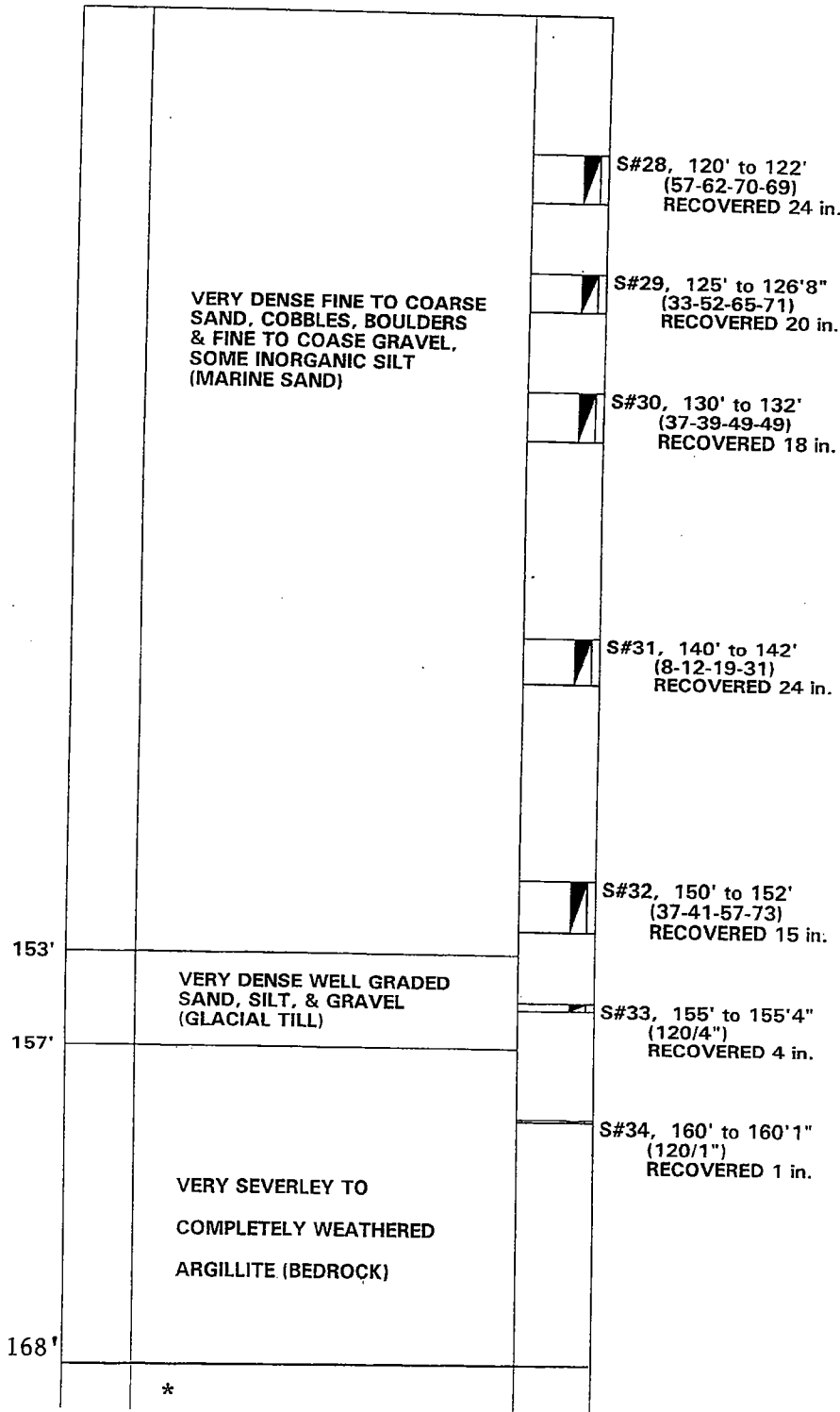
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 108



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To: McPHAIL ASSOCIATES, INC. 30 NORFOLK ST., CAMBRIDGE, MA.

Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 108

172'	* BEDROCK MIN PER FT--->	3 5 4 5 5	RUN#1, 172' to 177' (RECOVERED 56" (93%))
177'	* BEDROCK MIN PER FT--->	5 5 4 5 5	RUN#2, 177' to 182' (RECOVERED 57"(95%))
182'		5 1	

WATER LEVEL 8'

SIZE OF AUGERS 3-3/4" I.D. LENGTH 5'0"

SIZE OF CASING HW LENGTH 35'0"

SIZE OF CASING NW LENGTH 172'0"

SIZE OF ROCK NX LENGTH 10'0"

DRILLER: GERALD SMITH, INSPECTOR: TOM CORMICAN

DATE STARTED & COMPLETED 7-18-25-2005

* INTERBEDDED HARD MODERATLEY WEATHERED MODERATELY

FRACTURED TO SOUND, LIGHT GRAY/GREEN FINE GRAINED

DIBASE & SOFT, VERY SEVERELY TO SEVERELY WEATHERED EXTREMELY

TO MODERATELY FRACTURED LIGHT GRAY GREEN CAMBRIDGE ARGILLITE (BEDROCK)

All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

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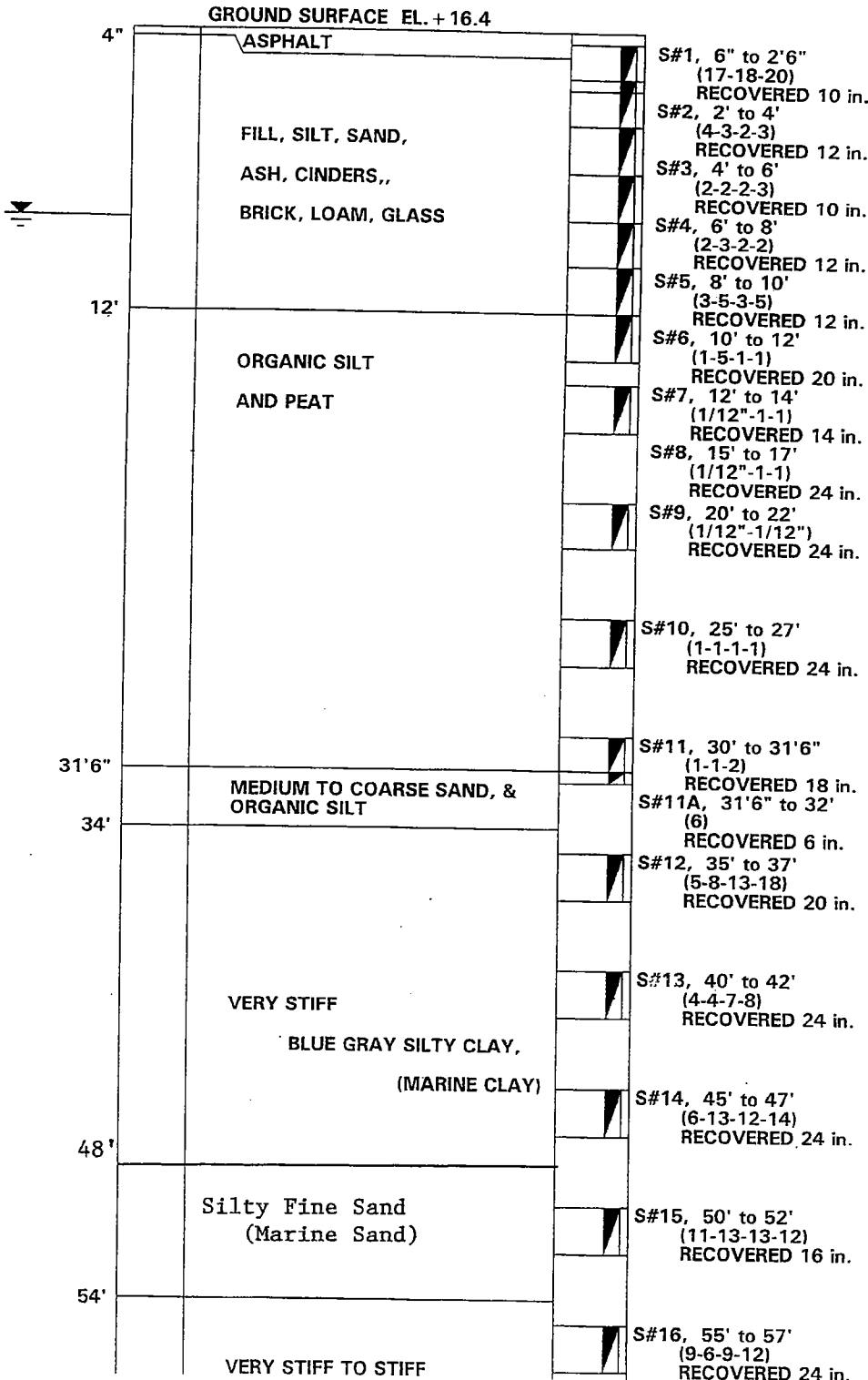
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 109



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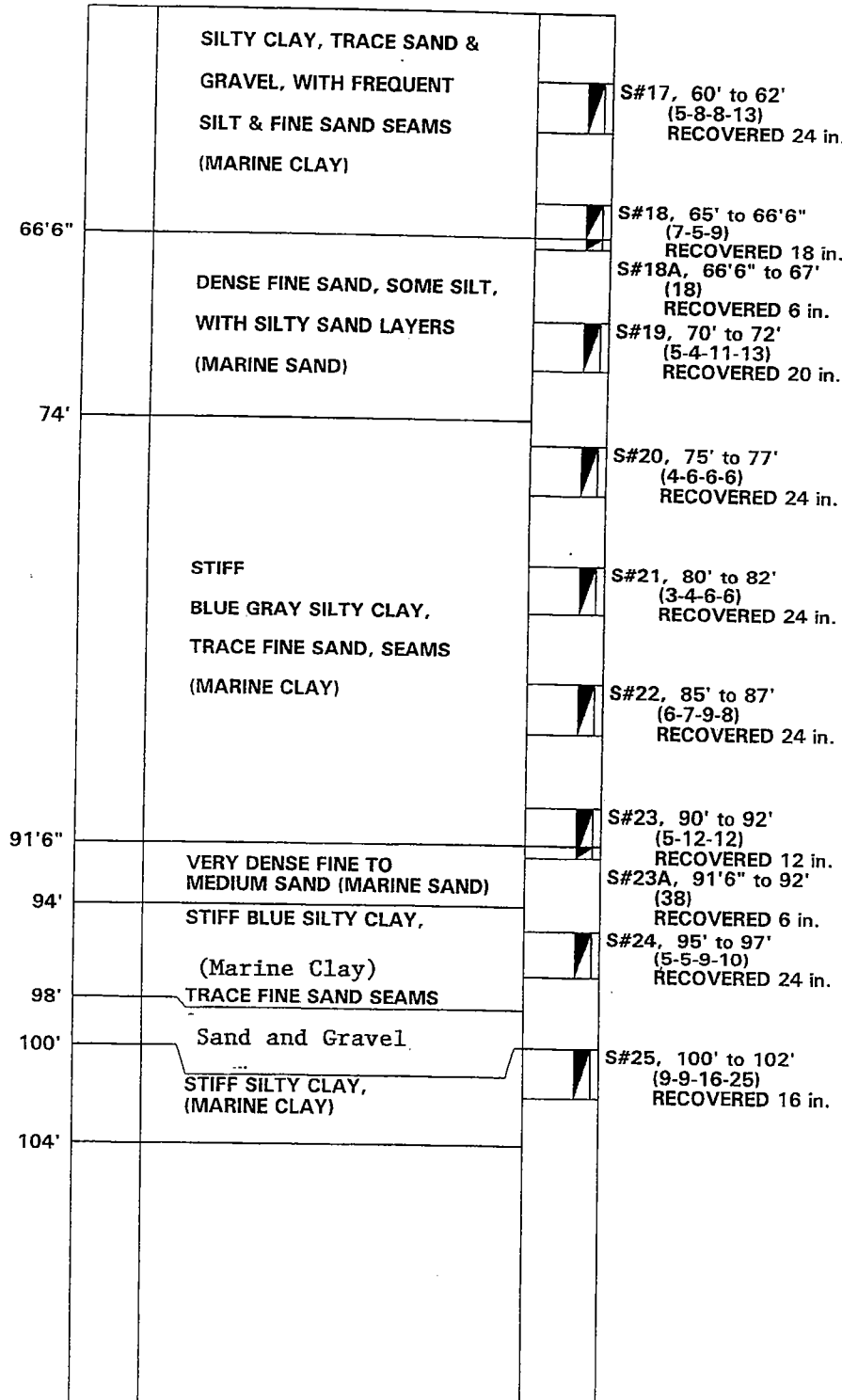
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 109



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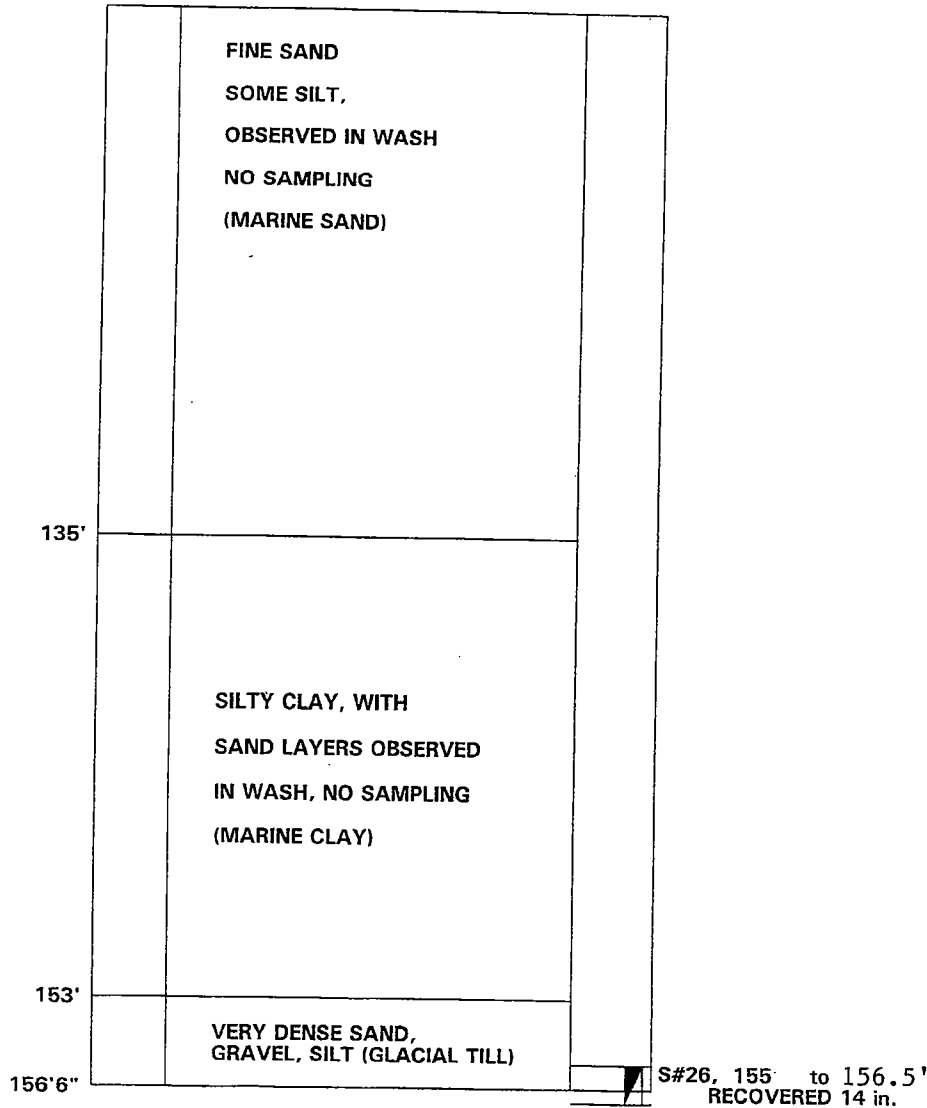
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 109



WATER LEVEL 8'
SIZE OF CASING NW LENGTH 35'0"
DRILLER: NEIL SMITH, INSPECTOR: TOM CORMICAN
DATE STARTED & COMPLETED 7-20-21-2005

All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (\pm). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (\pm).

Phone: (603) 437-1610

New Hampshire Boring, Inc.
P.O. Box 165
Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-109A

Project: Simmons College of Management

Project # G57201

Project Address: 300 The Fenway

City: Boston

State: MA Zip:

Date Start: 08-26-05

Date End: 08-26-05

Location: See Plan

Casing: HW

Sampler:

Casing: 4"ID

Sampler:

Type:

S/S

Size:

1-3/8 in. I.D.

Hammer:

140 lbs.

Fall:

30 in.

GROUND WATER OBSERVATION

Date:	Depth:	Casing:				Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	6" - 2'6"	24"	20"	20-14-7-7	4"	ASPHALT
-	S-2	2'6" - 4'6"	24"	16"	7-5-5-6	(Fill)	Black-brown, sand with some silt and gravel, with some ash and cinders, wood and glass (FILL)
2'6"							
-							
-							
-	S-3	4'6" - 6'6"	24"	7"	5-3-2-3		Bottom of Exploration = 8'6"
5'0"							
-	S-4	6'6" - 8'6"	24"	12"	4-4-7-8		
-							
7'6"						8'6"	
-							
-							
10'0"							
-							
-							
12'6"							
-							
-							
15'0"							
-							

Driller: C. O'Donnell

Helper:

Inspector: ADS

Remarks:

S/#: Sample

PEN: Penetration

REC: Recovery

S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
P.O. Box 165
Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-109B		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-26-05		Date End: 08-26-05				Location: See Plan	
Casing: HW Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4"ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
G R O U N D W A T E R O B S E R V A T I O N							
Date:	Depth:		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	6" - 2'6"	24"	18"	18-29-17-7	4"	ASPHALT
-	S-2	2'6" - 4'6"	24"	16"	7-2-2-2	(Fill)	Brown to black, sand with some silt and gravel and trace to some ash and cinders, and glass (FILL)
2'6"							
-							
-							
-	S-3	4'6" - 6'6"	24"	7"	2-1-2-2		
5'0"							
-	S-4	6'6" - 8'6"	24"	14"	5-4-3-3		
-							
7'6"						8'6"	
-							Bottom of Exploration = 8'6"
-							
-							
-							
10'0"							
-							
-							
12'6"							
-							
-							
-							
15'0"							
-							
Driller: C. O'Donnell			Helper:			Inspector:	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
P.O. Box 165
Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-109C		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-25-05		Date End: 08-25-05				Location: See Plan	
Casing: AW Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4"ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
GROUNDWATER OBSERVATION							
Date:	Depth:		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-						4"	ASPHALT
-	S-1	6" - 2'6"	24"	16"	12-17-13-9	Fill	Brown to gray sandy gravel with some silt and trace to some ash and cinders (Fill)
-	S-2	2'6" - 4'6"	24"	18"	5-4-3-3		
2'6"							
-							
-							
-	S-3	4'6" - 6'6"	24"	7"	2-2-3-4		
5'0"							
-	S-4	6'6" - 8'6"	24"	14"	4-5-4-3		
-							
7'6"						8'6"	
-							Bottom of Exploration = 8'6"
-							
10'0"							
-							
-							
12'6"							
-							
-							
15'0"							
-							
Driller: C. O'Donnell			Helper:			Inspector:	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
P.O. Box 165
Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-109D

Project: Simmons College of Management

Project # G57201

Project Address: 300 The Fenway

City: Boston

State: MA Zip:

Date Start: 08-25-05

Date End: 08-25-05

Location: See Plan

Casing: AW

Sampler:

Casing: 4"ID

Sampler:

Type:

S/S

Size:

1-3/8 in. I.D.

Hammer:

140 lbs.

Fall:

30 in.

GROUNDWATER OBSERVATION

Date:	Depth:		Casing:				Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION	
-	-	-	-	-	-	3"	ASPHALT	
-	S-1	6" - 2'6"	24"	16"	15-21-14-7	(Fill)	Brown to gray, sandy gravel with trace to some silt with some ash and cinders (FILL)	
-	S-2	2'6" - 4'6"	24"	17"	5-4-3-3			
2'6"	-	-	-	-	-			
-	-	-	-	-	-			
-	-	-	-	-	-	8'6"	Bottom of Exploration = 8'6"	
-	S-3	4'6" - 6'6"	24"	12"	3-5-3-4			
5'0"	-	-	-	-	-			
-	S-4	6'6" - 8'6"	24"	14"	4-5-4-3			
-	-	-	-	-	-			
-	-	-	-	-	-			
7'6"	-	-	-	-	-			
-	-	-	-	-	-			
-	-	-	-	-	-			
-	-	-	-	-	-			
10'0"	-	-	-	-	-			
-	-	-	-	-	-			
-	-	-	-	-	-			
-	-	-	-	-	-			
12'6"	-	-	-	-	-			
-	-	-	-	-	-			
-	-	-	-	-	-			
-	-	-	-	-	-			
-	-	-	-	-	-			
15'0"	-	-	-	-	-			
-	-	-	-	-	-			
-	-	-	-	-	-			
-	-	-	-	-	-			
-	-	-	-	-	-			

Driller: C. O'Donnell

Helper:

Inspector:

Remarks:

S/#: Sample

PEN: Penetration

REC: Recovery

S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
P.O. Box 165
Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-109E		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-25-05		Date End: 08-25-05				Location: See Plan	
Casing: HW Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4"ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
G R O U N D W A T E R O B S E R V A T I O N							
Date:		Depth:		Casing:		Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	6" - 2'6"	24"	21"	7-19-14-11	3"	ASPHALT
-	S-2	2'6" - 4'6"	24"	17"	5-4-3-3	(Fill)	Brown, sand with some silt and gravel with trace to some ash and cinders. (FILL)
2'6"							
-	S-3	4'6" - 6'6"	24"	10"	3-2-2-5		
5'0"	S-4	6'6" - 8'6"	24"	11"	4-5-3-4		
-						8'6"	Bottom of Exploration = 8'6"
7'6"							
-							
10'0"							
-							
12'6"							
-							
-							
15'0"							
Driller: C. O'Donnell			Helper:			Inspector:	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

CARR-DEE CORP.

37 LINDEN STREET

P.O. BOX 67

MEDFORD, MA 02155-0001

Telephone (617) 391-4500

To: McPHAIL ASSOCIATES, INC. 30 NORFOLK ST., CAMBRIDGE, MA.

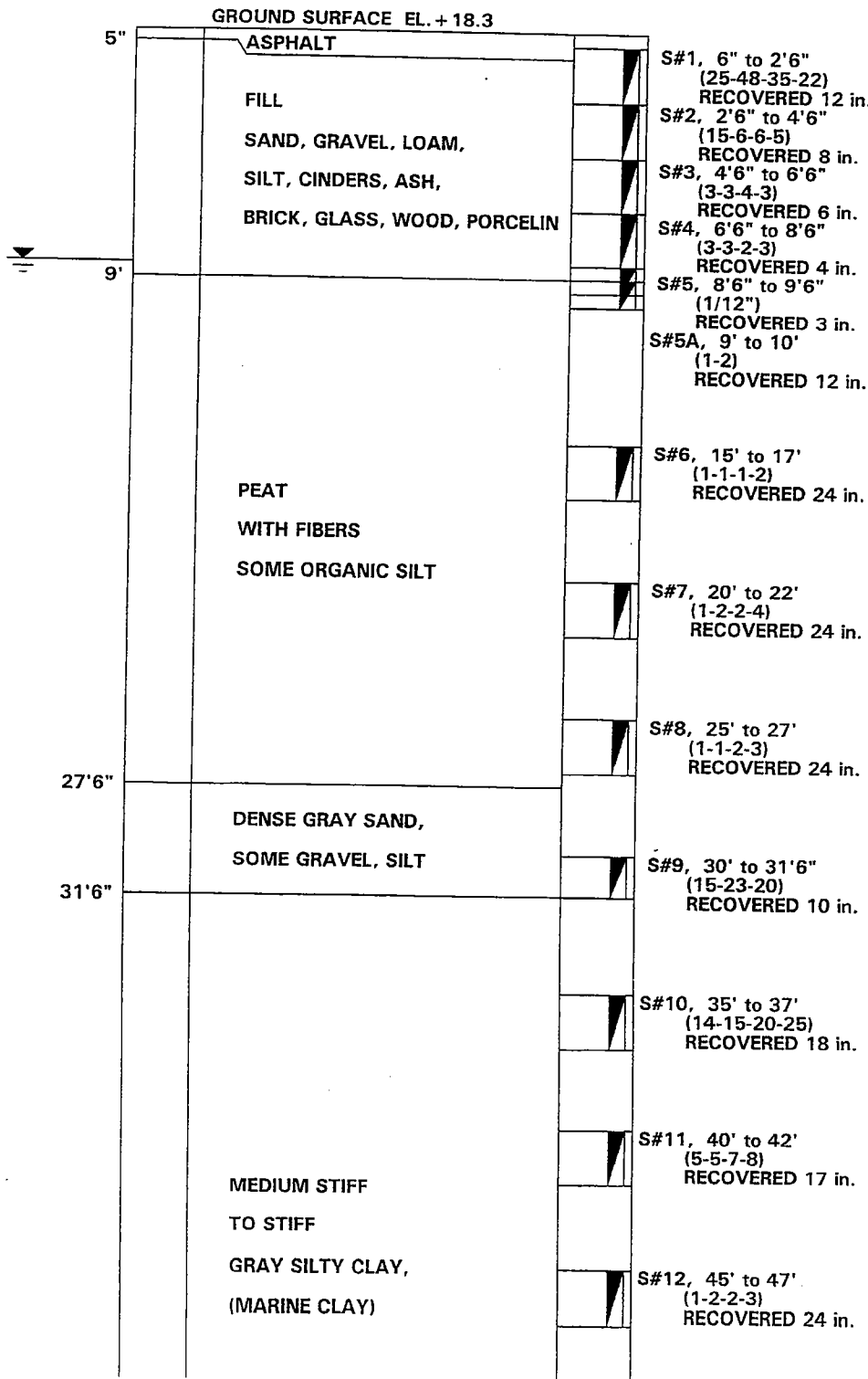
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 6 ft.

BORING 110



All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches(±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

CARR-DEE CORP.

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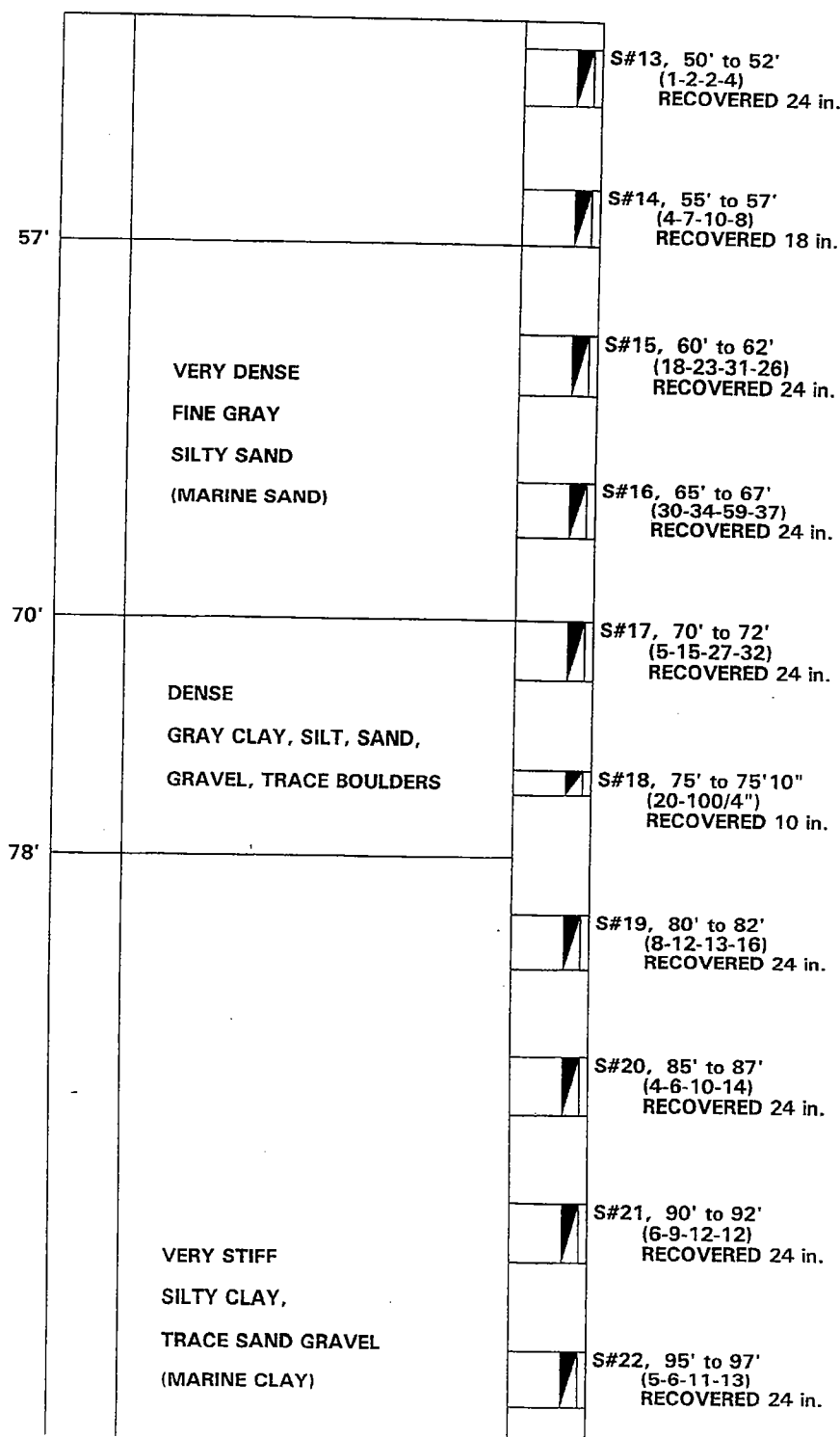
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 6 ft.

BORING 110



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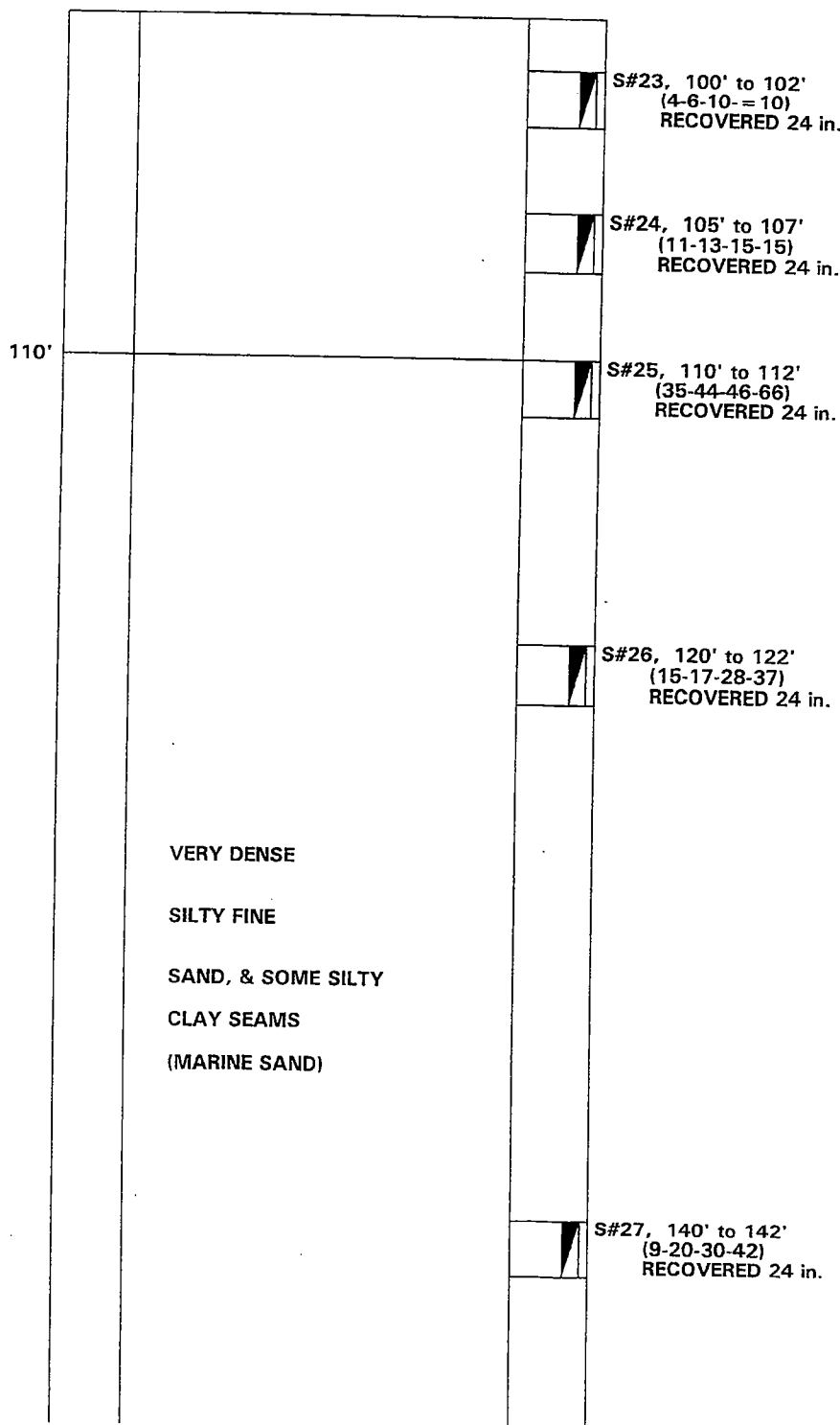
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 6 ft.

BORING 110



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To: McPHAIL ASSOCIATES, INC. 30 NORFOLK ST., CAMBRIDGE, MA.

Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 6 ft.

BORING 110

152'				
		VERY DENSE, SILT & GRAVEL & sand WITH COBBLES, & BOULDERS (GLACIAL TILL)		
155'2"		(GLACIAL TILL) GLACIAL TILL WITH		S#28, 155' to 155'2" (120/2") RECOVERED 2 in.
		COBBLES, & BOULDERS		
158'			3	RUN#1, 158' to 163' (RECOVERED 4" (.06%))
		COBBLES, & BOULDERS (GLACIAL TILL) MIN PER FT--->	3	
			3	
			3	
163'			4	
		WEATHERED ARGILLITE		S#29, 163' to 163'4" (100/4") RECOVERED 4 in.
165'				RUN#2, 165' to 170' (RECOVERED 32" (53%))
		* BEDROCK MIN PER FT--->	3	
			4	
			4	
			5	
170'			7	

WATER LEVEL 8'6"

SIZE OF CASING HW LENGTH 35'0"

SIZE OF ROCK NX LENGTH 5'0"

DRILLER: RENE DE SIMONE, INSPECTOR: TON CORMINCAN

DATE STARTED & COMPLETED 7-1-12-2005

*VERY SOFT TO SOFT, VERY SEVERELY TO COMPLETELY
WEATHERED CAMBRIDGE ARGILLITE (BEDROCK)

All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

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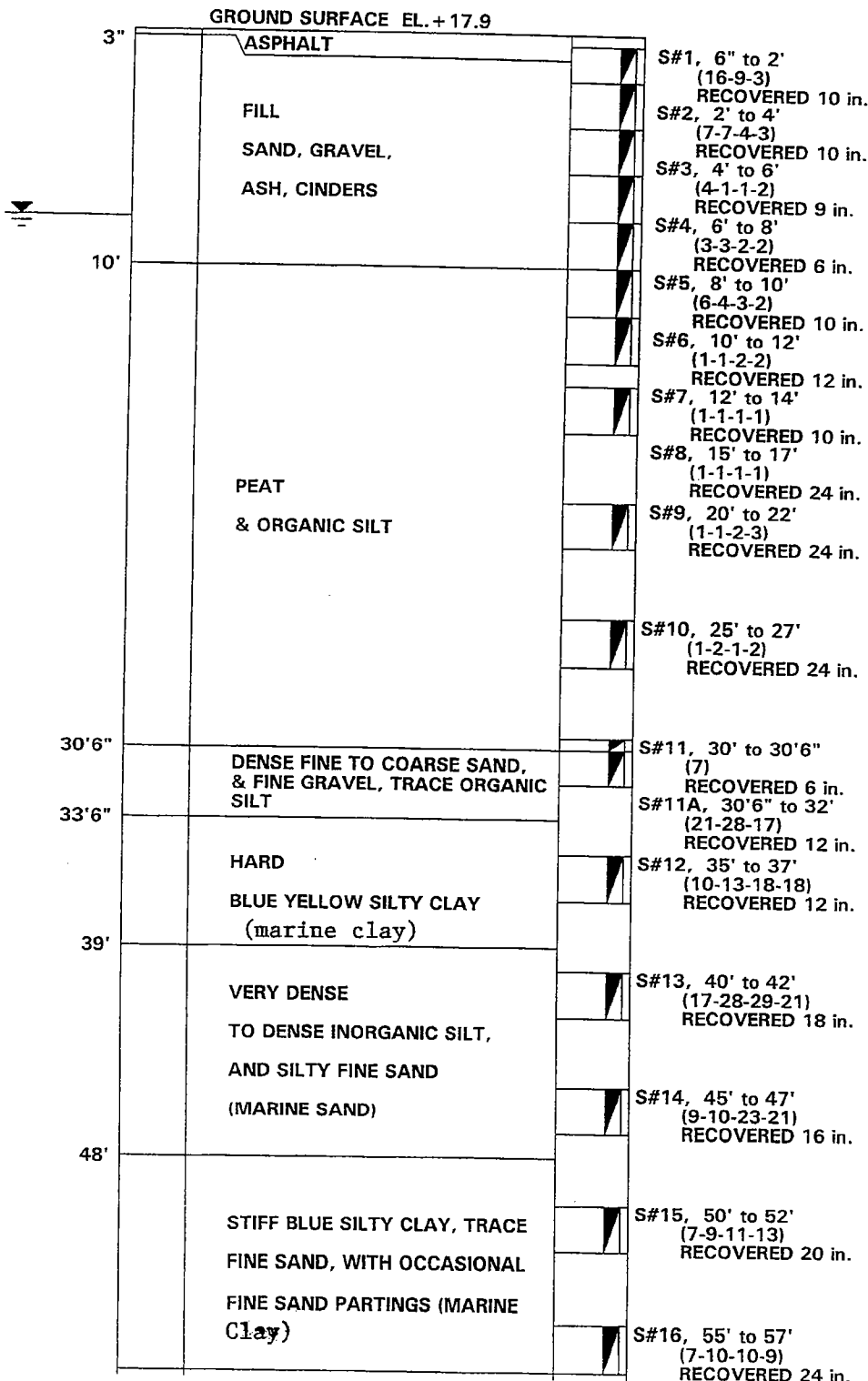
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 111



All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

CARR-DEE CORP.

37 LINDEN STREET

P.O. BOX 67

MEDFORD, MA 02155-0001

Telephone (617) 391-4500

To: McPHAIL ASSOCIATES, INC. 30 NORFOLK ST., CAMBRIDGE, MA.

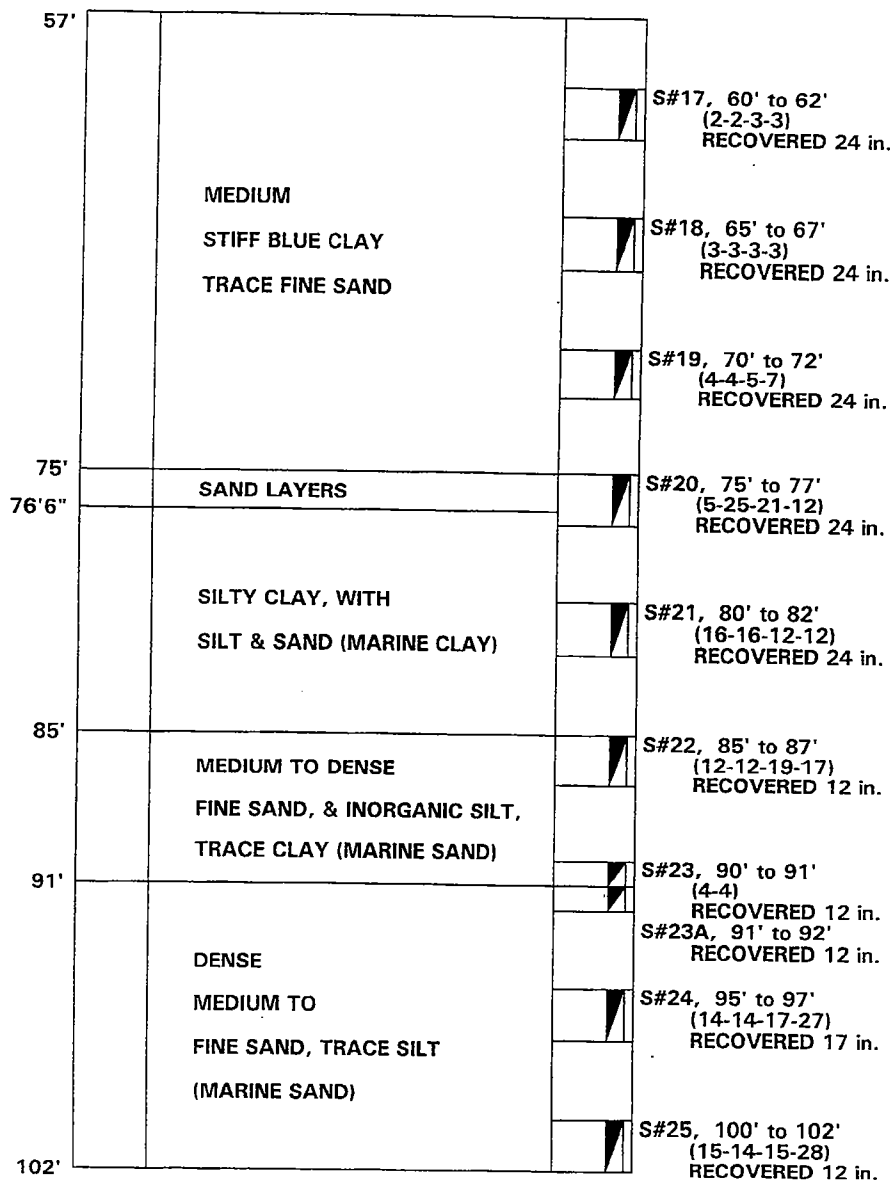
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 111



WATER LEVEL 8'
 SIZE OF AUGERS 3-3/4" I.D. LENGTH 5'0"
 SIZE OF CASING HW LENGTH 35'0"
 DRILLER: GERALD SMOTH, INSPECTOR: TOM CORMICAN
 DATE STARTED & COMPLETED 7-25-27-2005

All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

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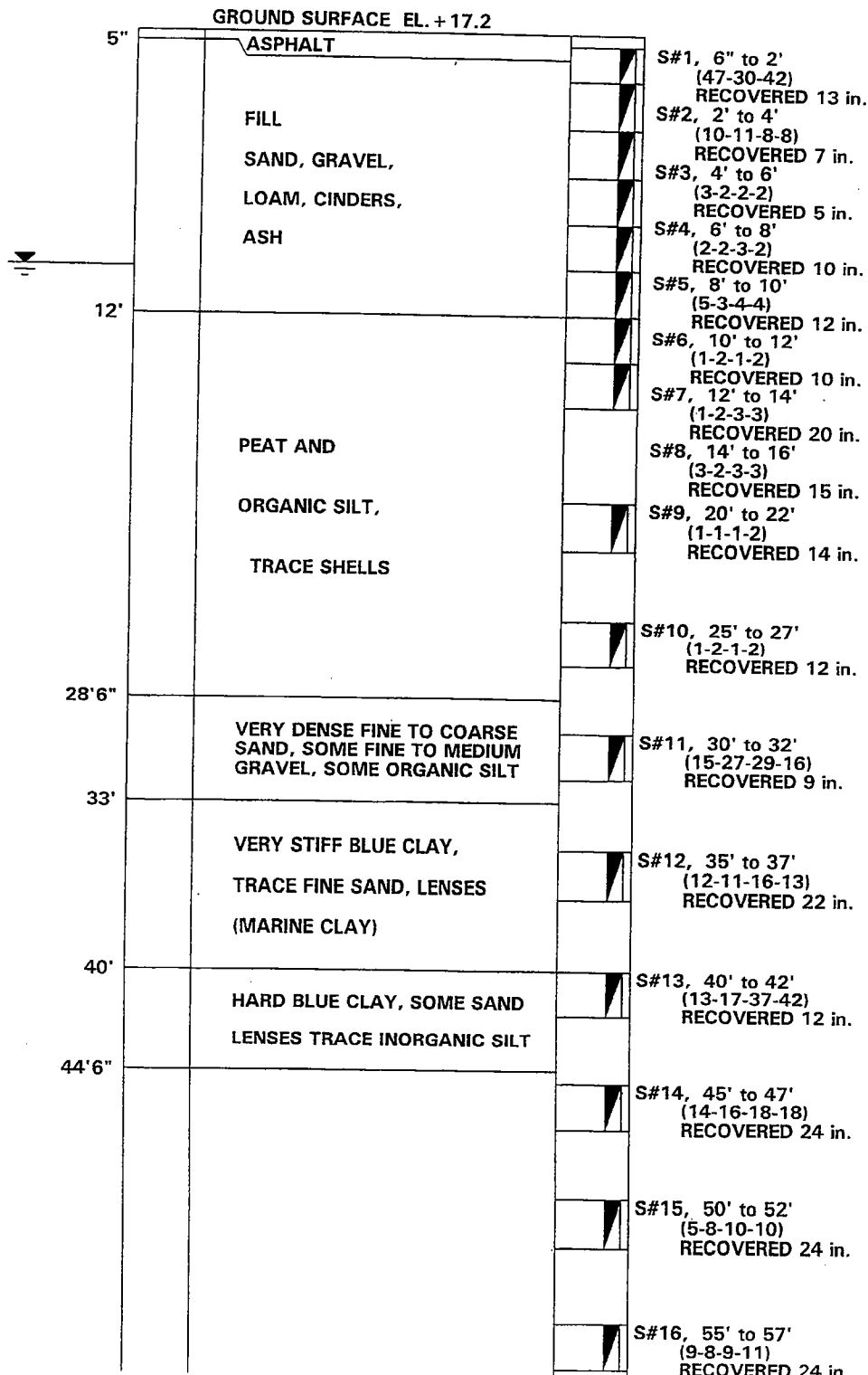
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 112

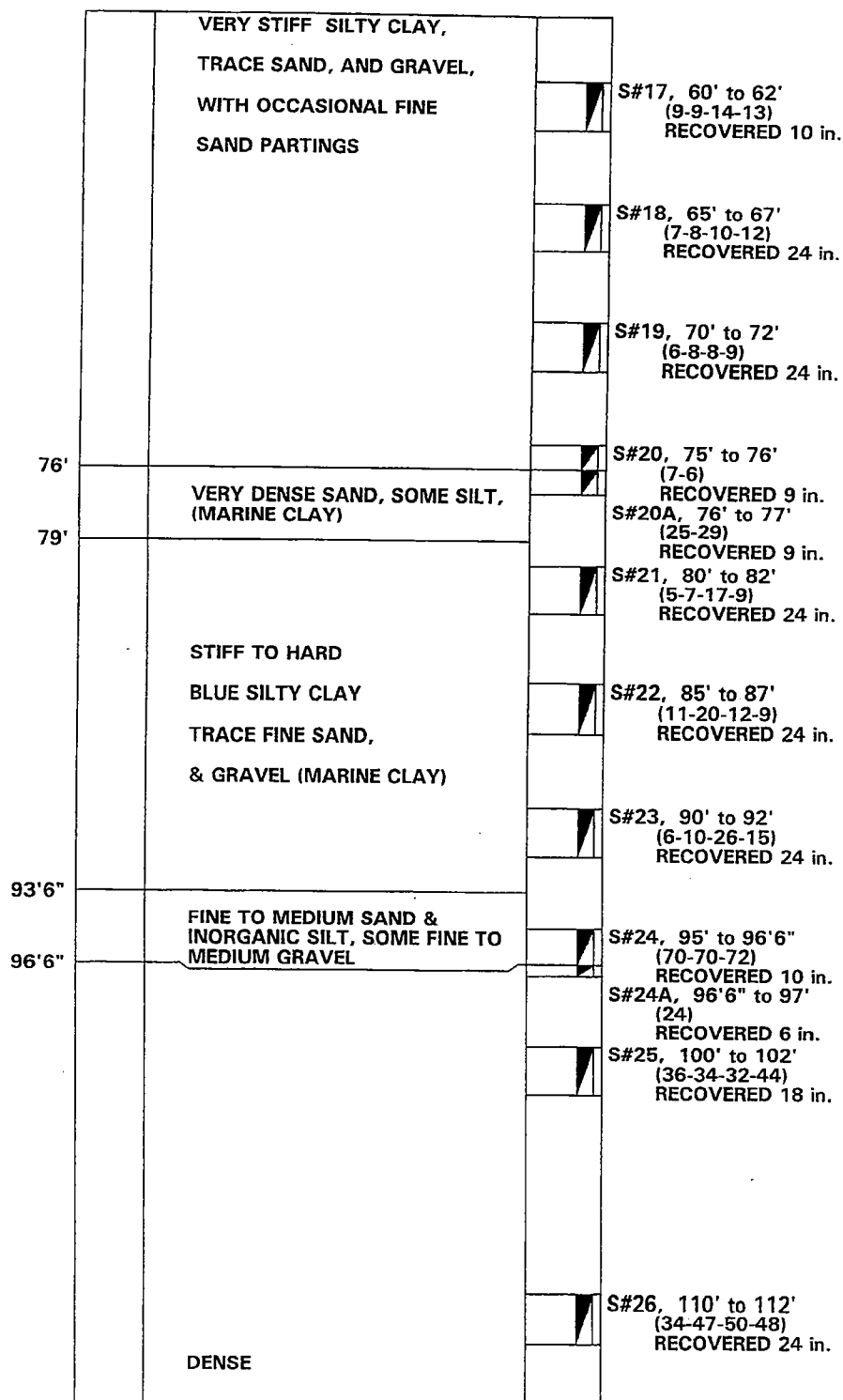


All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

CARR-DEE CORP.

37 LINDEN STREET P.O. BOX 67 MEDFORD, MA 02155-0001 Telephone (617) 391-4500
 To: McPHAIL ASSOCIATES, INC. 30 NORFOLK ST., CAMBRIDGE, MA. Date: 7-28-2005 Job No.: 2005-128
 Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA Scale: 1 in. = 7 ft.

BORING 112



All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

CARR-DEE CORP.

37 LINDEN STREET

P.O. BOX 67

MEDFORD, MA 02155-0001

Telephone (617) 391-4500

To: McPHAIL ASSOCIATES, INC. 30 NORFOLK ST., CAMBRIDGE, MA.

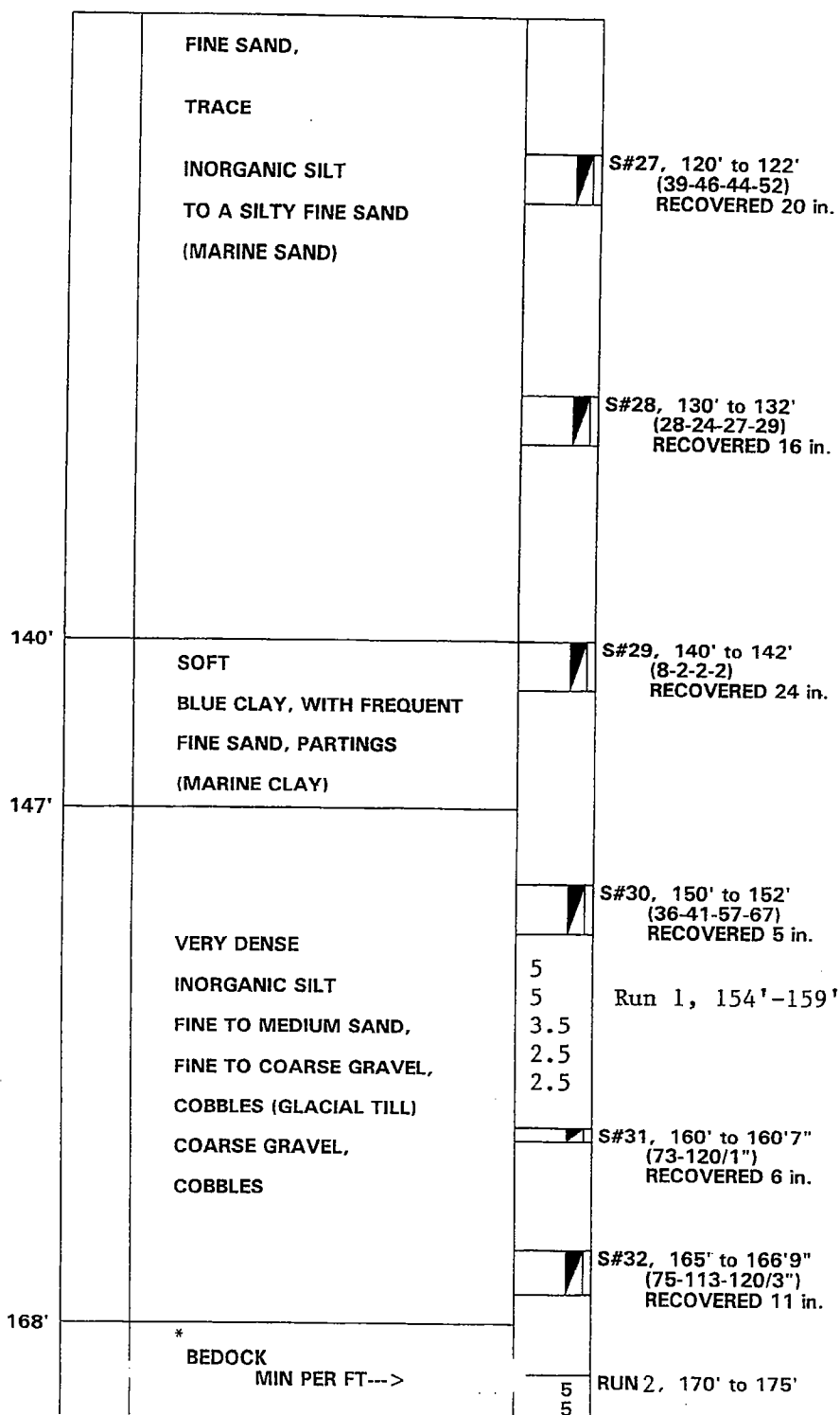
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 112



All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

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To: McPHAIL ASSOCIATES, INC. 30 NORFOLK ST., CAMBRIDGE, MA.

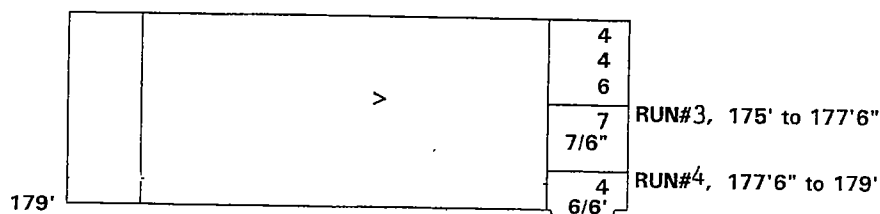
Date: 7-28-2005

Job No.: 2005-128

Location: SIMMONS COLLEGE SCHOOL OF MANAGEMENT, BOSTON, MA

Scale: 1 in. = 7 ft.

BORING 112



WATER LEVEL 10'
 SIZE OF AUGERS 3-3/4" I.D. LENGTH 5'0"
 SIZE OF CASING NW LENGTH 35'0"
 SIZE OF ROCK NX LENGTH 5'0"
 DRILLER: GERALD SMITH, INSPECTOR: TOM CORMICAN
 DATE STARTED & COMPLETED 7-11-15-2005
 * VERY SOFT, TO SOFT, VERY SEVERELY TO COMPLETELY
 WEATHERED, EXTREMELY TO MODERATELY FRACTURED GRAY
 GREEN, CAMBRIDGE ARGILLITE, WITH OCCASIONAL QUARTZ VEINS

All samples have been visually classified by DRILLER. Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches (±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

Phone: (603) 437-1610

New Hampshire Boring, Inc.
P.O. Box 165
Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-201 (pg 1 of 2)		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-29-05		Date End: 08-29-05				Location: See Plan	
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
GROUNDWATER OBSERVATION							
Date: 08-29-05	Depth: 9'		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	8"	11-13-6-3	2"	ASPHALT
-							Brown/black, fine to coarse SAND and SILT, some ash and cinders.
-	S-2	2' - 4'	24"	10"	3-3-3-4		Brown/black, fine to coarse SAND and SILT, some ash. and cinders
2'6"							
-							
-	S-3	4' - 6'	24"	14"	29-42-20-11		Brown/black, fine to coarse SAND and SILT, some ash, rock in tip of spoon..
-							
5'0"							
-	S-4	6' - 8'	24"	1"	5-4-4-3		Brown/black, fine to coarse SAND and SILT, some ash.
-							
7'6"							
-	S-5	8' - 10'	24"	14"	5-3-2-2		Brown/black, fine to coarse SAND and SILT, some ash.
-							
-						10'	(Fill)
10'0"	S-6	10' - 12'	24"	24"	2-3-2-2		Gray, ORGANIC SILT and PEAT.
-							
-							
-	S-7	12' - 14'	24"	24"	3-2-3-4		Gray, ORGANIC SILT and PEAT.
12'6"							
-							
-							
-							
15'0"							
-							
Driller: David Lucia			Helper: Jim Cross			Inspector: Matt	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
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Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-201 (pg 2 of 2)		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-29-05		Date End: 08-29-05				Location: See Plan	
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
G R O U N D W A T E R O B S E R V A T I O N							
Date: 08-29-05	Depth: 9'		Casing:				Stabilization Period Upon Completion
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
- - - 17'6" - - - 20'0" - - - 22'6" - - - 25'0" - - - 27'6" - - - 30'0" -	S-8	18' - 20'	24"	24"	3-2-3-3	20'	Gray ORGANIC SILT and PEAT. Bottom of Exploration = 20' 2" PVC well installed at 15'
Driller: David Lucia			Helper: Jim Cross			Inspector: Matt	
Remarks:							
S/#: Sample		PEN: Penetration		REC: Recovery		S/C: Strata Change	

Phone: (603) 437-1610

New Hampshire Boring, Inc.
P.O. Box 165
Derry, NH 03038
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Fax: (603) 437-0034

Boring # B-202 (pg 1 of 2)

Project: Simmons College of Management

Project # G57201

Project Address: 300 The Fenway

City: Boston

State: MA Zip:

Date Start: 08-26-05

Date End: 08-26-05

Location: See Plan

Casing: HSA

Sampler:

Casing: 4 1/4" ID

Sampler:

Type:
Hammer:S/S
140 lbs.Size:
Fall:1-3/8 in. I.D.
30 in.

GROUNDWATER OBSERVATION

Date:	Depth:	Casing:				Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	1' - 3'	24"	17"	5-4-3-3	3"	ASPHALT
-						(Fill)	
2'6"							
-	S-2	3' - 5'	24"	16"	18-11-8-2		
-							
5'0"	S-3	5' - 7'	24"	8"	2-2-2-1		Brown to Black, sand with some silt and gravel with some ash and cinders, brick, and trace organics (FILL)
-							
7'6"	S-4	7' - 9'	24"	7"	2-1-1-3		
-							
10'0"	S-5	9' - 11'	24"	7"	1-1-1-2		
-							
12'6"	S-6	11' - 13'	24"	5"	1-1-2-2		
-							
15'0"	S-7	13' - 15'	24"	6"	3-2-3-3	13'	
-							
15'0"	S-8	15' - 17'	24"	20"	3-3-4-4		Brown/gray fibrous PEAT and Organic silt. (ORGANIC DEPOSIT)
-							

Driller: C. O'Donnell	Helper:	Inspector: Matt
Remarks:		
S/#: Sample	PEN: Penetration	REC: Recovery
		S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
P.O. Box 165
Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-202 (pg 2 of 2)

Project: Simmons College of Management

Project # G57201

Project Address: 300 The Fenway

City: Boston

State: MA Zip:

Date Start: 08-26-05

Date End: 08-26-05

Location: See Plan

Casing: HSA

Sampler:

Casing: 4 1/4" ID

Sampler:

Type:

S/S

Size:

1-3/8 in. I.D.

Hammer:

140 lbs.

Fall:

30 in.

GROUNDWATER OBSERVATION

GROUNDWATER OBSERVATION							
Date:	Depth:		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-9	17' – 19'	24"	22"	3-3-4-5		Brown/gray, fibrous PEAT and organic silt.
-							
-							
-							
17'6"	S-9	19' – 21'	24"	18"	2-2-2-3	21'	
-							
-							
-							
20'0"						Bottom of Exploration = 21'	
-							
-							
-							
22'6"							
-							
-							
-							
25'0"							
-							
-							
-							
27'6"							
-							
-							
-							
30'0"							
-							
Driller: C. O'Donnell			Helper:			Inspector: Matt	
Remarks:							
S/#: Sample		PEN: Penetration			REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
P.O. Box 165
Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-203		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-26-05		Date End: 08-26-05				Location: See Plan	
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
GROUNDWATER OBSERVATION							
Date: 08-26-05	Depth: 7'		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	15"	4-5-5-6		Brown, FILL, some coarse sand, trace ash.
-							
-							
-	S-2	2' - 4'	24"	10"	3-4-4-5		Brown, fine SAND.
2'6"							
-							
-							
-	S-3	4' - 6'	24"	8"	2-1-2-3		Brown, coarse SAND, some fill, trace ash.
-							
5'0"							
-							
-	S-4	6' - 8'	24"	18"	1-2-1-3		Gray, SAND, some fill, trace ash.
-							
-							
7'6"						8'	(Fill)
-	S-5	8' - 10'	24"	22"	4-3-3-5		Gray, SILT, with organic traces.
-							
-							
-							
10'0"	S-6	10' - 12'	24"	24"	4-4-5-4		Gray ORGANIC SILT, some peat.
-							
-							
-							
-						12'	
12'6"							Bottom of Exploration = 12'
-							
-							
-							
15'0"							
-							
Driller: David Lucia			Helper: Jim Cross			Inspector: Matt	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
P.O. Box 165
Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-204		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-25-05		Date End: 08-25-05				Location: See Plan	
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
GROUNDWATER OBSERVATION							
Date: 08-25-05	Depth: 8'		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	8"	17-22-15-17	3"	ASPHALT
-							Brown, fine to coarse SAND, some silt, trace medium gravel.
-	S-2	2' - 4'	24"	6"	11-15-8-6		Brown, fine to coarse SAND and SILT.
2'6"							
-							
-	S-3	4' - 6'	24"	4"	3-2-1-1		Black, fine to coarse SAND and SILT, some ash.
-							
5'0"							
-	S-4	6' - 8'	24"	18"	3-6-1-1		Black, fine to coarse SAND and SILT, some ash.
-							
-							(Fill)
7'6"							
-	S-5A	8' - 9'	12"	8"	3-2	9'	Black, fine to coarse SAND and SILT, some ash.
-	S-5B	9' - 10'	12"	12"	2-1		Black, fine ORGANIC SILT and peat.
-							
-							
10'0"	S-6	10' - 12'	24"	20"	2-1-1-2		Black, fine ORGANIC SILT and peat.
-							
-						12'	
-							
12'6"							Bottom of Exploration = 12'
-							
-							
-							
15'0"							
-							
Driller: Kenneth Smith			Helper: Dave Lucia			Inspector: Amy	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
P.O. Box 165
Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-205

Project: Simmons College of Management

Project # G57201

Project Address: 300 The Fenway

City: Boston

State: MA Zip:

Date Start: 08-26-05

Date End: 08-26-05

Location: See Plan

Casing: HSA

Sampler:

Casing:

Sampler:

Type:

S/S

Size:

1-3/8 in. I.D.

Hammer:

140 lbs.

Fall:

30 in.

GROUNDWATER OBSERVATION

Date:
08-26-05Depth:
10'

Casing:

Stabilization Period
Upon Completion

DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0 - 2'	24"	10"	9-16-7-7	3"	ASPHALT
-							
-							
-	S-2	2' - 4'	24"	20"	6-5-3-2		
2'6"							
-							
-							
-	S-3	4' - 6'	24"	12"	1-1-2-3		Brown, sandy gravel with some silt with glass, ash and cinders (FILL)
-							
5'0"							
-							
-	S-4	6' - 8'	24"	13"	3-1-1-2		
-							
-							
7'6"							
-	S-5	8' - 10'	24"	12"	4-6-5-6		
-							
-							
10'0"	S-6	10' - 12'	24"	13"	1-2-1-2	10'	
-							
-							
-							
-	S-7	12' - 14'	24"	15"	1-2-1-2		brown, organic silt and peat fibers (ORGANIC DEPOSIT)
12'6"							
-							
-						12'	
-							
15'0"							Bottom of Exploration = 14'
-							

Driller: Charlie

Helper: John

Inspector: ADS

Remarks:

S/#: Sample

PEN: Penetration

REC: Recovery

S/C: Strata Change






SIMMONS COLLEGE
BOSTON, MASSACHUSETTS
LOCATION SEE FIG.2

RECORD OF BOREHOLE B-206

PROJECT: 4371

SHEET 1 of 5
DATE: AUGUST 15, 2005
DATUM BOSTON CITY BASE
HW CASING TO 145'

SAMPLER HAMMER WT. 140 LB. DROP 30 IN.

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEV	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
0	0	Ground Surface								
	15.2	Asphalt								
		Loose to compact, brown to black silty sand, trace gravel with ash and cinders, glass. (Fill)		S-1	SS	31-13-16-10	0"			
				S-2	SS	4-3-2-3	4"			
5				S-3	SS	3-2-2-2	14"			
				S-4	SS	3-1-2-2	12"			
	7.2	Loose to firm, black to brown organic silt with ash, cinders, gravel, trace sand. (Fill)		S-5	SS	4-4-3-2	13"			
10				S-6	SS	1-1-4-3	4"			
	12	Very soft to firm, dark gray to brown, organic silt, trace to some fibrous peat, trace sand. (Organics)		S-7	SS	3-2-4-2	22"			
	3.2									
15				S-8	SS	1-1-1-1	24"			
20				S-9	SS	WOH24"	24"			
25				S-10	SS	WOH24"	24"			
30	-14.8	Compact, gray-brown organic silt and sand, cobbles. (Glacial Outwash)		S-11	SS	3-6-7-14	3"			
	33									
	-17.8	Hard to firm, gray silty clay. (Marine Clay)		S-12	SS	19-18-18-21	0"			
35										
40										

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
Consulting Geotechnical Engineers

DRAWN: F.G.P.
CHECKED: J.W.P.

SIMMONS COLLEGE

BOSTON, MASSACHUSETTS

LOCATION SEE FIG.2

SAMPLER HAMMER WT.140 LB. DROP 30 IN.

RECORD OF BOREHOLE B-206

PROJECT: 4371

SHEET 2 of 5

DATE: AUGUST 15, 2005

DATUM BOSTON CITY BASE

HW CASING TO 145'

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEVN	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
		Hard to firm, gray silty clay. (Marine Clay)		S-13	SS	4-3-2-5	24"			
45	-29.8									
		Compact, gray, silty fine sand. (Marine Sand)		S-14	SS	9-8-7-5	12"			
50										
				S-15	SS	12-9-6-7	18"			
52	-36.8									
55				S-16	SS	4-12-15-17	7"			
60				S-17	SS	13-14-18-19	2"			
65		Stiff to hard, gray, silty clay, trace sand and gravel. (Marine Clay)		S-18	SS	5-6-9-12	24"			
70				S-19	SS	13-14-14-22	4"			
75				S-20	SS	5-4-4-6	24"			
80	-64.8									

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
Consulting Geotechnical EngineersDRAWN: F.G.P.
CHECKED: J.W.P.

SIMMONS COLLEGE
BOSTON, MASSACHUSETTS
LOCATION SEE FIG.2

RECORD OF BOREHOLE B-206

PROJECT: 4371

SHEET 3 of 5
DATE: AUGUST 15, 2005
DATUM BOSTON CITY BASE
HW CASING TO 145'

SAMPLER HAMMER WT.140 LB. DROP 30 IN.

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEV	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
	84	Firm, gray, silty clay. (Marine Clay)		S-21	SS	6-3-4-7	24"			
	-68.8									
85		Compact to dense, gray, fine to medium sand, trace to some silt with few silty clay layers. (Marine Sand)		S-22	SS	WOR5-7-10	24"			
90				S-23	SS	4-5-7-7	24"			
95				S-24	SS	18-21-17-19	22"			
100		Hard, gray, silty clay with few sand lenses (Marine Clay)		S-25	SS	11-17-22-25	24"			
102										
	-87.3			S-26	SS	22-20-15-16	24"			
105										
110		Dense, brown-gray, fine sand with silt lenses to fine sand with a 2" silty fine sand layer. (Marine Sand)		S-27	SS	21-23-19-18	21"			
112										
	-97.3			S-28	SS	14-22-27-26	14"			
115										
120										

REMARKS: Depth to water level: 10'





McPHAIL ASSOCIATES, INC.
Consulting Geotechnical Engineers

DRAWN: F.G.P.
CHECKED: J.W.P.

SIMMONS COLLEGE
BOSTON, MASSACHUSETTS
LOCATION SEE FIG.2
SAMPLER HAMMER WT.140 LB. DROP 30 IN.

RECORD OF BOREHOLE B-206

PROJECT: 4371
SHEET 4 of 5
DATE: AUGUST 15, 2005
DATUM BOSTON CITY BASE
HW CASING TO 145'

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEV	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
125	126	Dense, brown-gray, fine sand with silt lenses to fine sand with a 2" silty fine sand layer. (Marine Sand)		S-29	SS	17-21-25-	12"			
	-111			S-30	SS	42-49-52-	18"			
130		Compact to very dense, gray, fine sand, some silt to fine sand with silty fine sand layers to silty fine sand. (Marine Sand)		S-31	SS	27-24-34-	17"			
135				S-32	SS	24-37-38-	17"			
140				S-33	SS	15-19-29-	19"			
145				S-34	SS	11-13-13-	24"			
148	-132	Very dense, gray, silt, sand, gravel, some clay and weathered argillite. (Glacial Till)		S-35	SS	47-34-110	12"			
150										
154	-139	RUN1: 154.5'-159.5' RQD = 23.3%		S-36	SS	100 1/2"	2"			
155				R-1	RC	5-5-5-5-6 MIN./FT.	60"			
160										

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
Consulting Geotechnical Engineers

DRAWN: F.G.P.
CHECKED: J.W.P.

SIMMONS COLLEGE
BOSTON, MASSACHUSETTS
LOCATION SEE FIG.2

RECORD OF BOREHOLE B-206

PROJECT: 4371


SHEET 5 of 5

DATE: AUGUST 15, 2005

DATUM BOSTON CITY BASE

SAMPLER HAMMER WT.140 LB. DROP 30 IN.

HW CASING TO 145'

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEVN	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
165	170	RUN2: 159.5'-164.5' RQD = 53.3%		R-2	RC	6-6.5-7-7-7.5 MIN./FT.	60"			
		Medium to moderately hard, moderately to severely weathered, extremely to slightly fractured, gray-light gray, fine grained ARGILLITE, very close to close fractures, very thin bedding, low angle to moderately dipping. (Bedrock)		R-3	RC	6-6-6-6-6 MIN./FT.	58"			
170	-154	End of Borehole								
175										
180										
185										
190										
195										
200										

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
Consulting Geotechnical Engineers

DRAWN: F.G.P.
CHECKED: J.W.P.

Phone: (603) 437-1610

New Hampshire Boring, Inc.
P.O. Box 165
Derry, NH 03038
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Fax: (603) 437-0034

Boring # B-207 (Pg 1 of 2)		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-25-05		Date End: 08-25-05		Location: See Plan			
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
G R O U N D W A T E R O B S E R V A T I O N							
Date: 08-18-05	Depth:		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0 - 2'	24"	16"	13-8-9	FILL	Black-brown, sand with some gravel and silt with a trace to some ash and cinders (FILL)
-							
-	S-2	2' - 4'	24"	12"	4-4-5-7		
2'6"							
-							
-	S-3	4' - 6'	24"	14"	12-13-2-2		
-							
5'0"							
-	S-4	6' - 8'	24"	12"	1-1-WOR		
-							
7'6"							
-	S-5	8' - 10'	24"	12"	4-4-2-2		
-							
-							
10'0"	S-6	10' - 12'	24"	6"	2-2-1-1		
-							
-							
-						12'	
-	S-7	12' - 14'	24"	18"	1-1-1/12"		
12'6"							
-							
-							
-	S-8	14' - 16'	24"	12"	2-2-1-1		Brown, organic silt and fibrous PEAT. (ORGANIC DEPOSIT)
-							
15'0"							
-							
Driller: C. O'Donnell			Helper:			Inspector: ADS	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

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Boring # B-207 (pg 2 of 2)		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-25-05		Date End: 08-25-05				Location: See Plan	
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
G R O U N D W A T E R O B S E R V A T I O N							
Date: 08-25-05	Depth:		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
- - - - 17'6"	S-9	16' - 18'	24"	16"	2-3-3-3	18'	Brown, organic silt and fibrous PEAT.
- - - - 20'0"							Bottom of Exploration = 18'
- - - - 22'6"							
- - - - 25'0"							
- - - - 27'6"							
- - - - 30'0"							
Driller: David Lucia			Helper: Jim Cross			Inspector: ADS	
Remarks: Installed 2" PVC well at 15'.							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

SIMMONS COLLEGE
BOSTON, MASSACHUSETTS
LOCATION SEE FIG.2
SAMPLER HAMMER WT.140 LB. DROP 30 IN.

RECORD OF BOREHOLE B-208

SHEET 1 of 5
DATE: AUGUST 19, 2005
DATUM BOSTON CITY BASE
HW CASING TO 35'

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEV	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
0	0	Ground Surface								
	16.3	Asphalt								
				S-1	SS	34-26-20	18"			
				S-2	SS	16-22-16-29	12"			
5				S-3	SS	15-12-10-8	10"			
				S-4	SS	7-4-2-6	4"			
				S-5	SS	4-2-4-4	10"			
10				S-6	SS	13-15-14-14	0"			
15				S-7	SS	8-9-3	6"			
	16.5			S-7A	SS	4	6"			
	-0.2	Very loose to loose, dark brown, fibrous, organic silt. (Organics)								
20				S-8	SS	3-1-2-2	8"			
	-3.7									
25				S-9	SS	1-1-1-1	18"			
30				S-10	SS	1-2-2-3	24"			
35				S-11	SS	10-10-15-16	22"			
	33									
	-16.7									
		Very stiff, gray, silty clay. (Marine Clay)								
40										
	40									
	-23.7									

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
Consulting Geotechnical Engineers

DRAWN: F.G.P.
CHECKED: J.W.P.

SIMMONS COLLEGE

BOSTON, MASSACHUSETTS

LOCATION SEE FIG.2

SAMPLER HAMMER WT.140 LB. DROP 30 IN.

RECORD OF BOREHOLE B-208


PROJECT: 4371

SHEET 2 of 5

DATE: AUGUST 19, 2005

DATUM BOSTON CITY BASE

HW CASING TO 35'

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL		
DEPTH	DEPTH ELEVN	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)				
45		Firm to very stiff, gray, silty clay. (Marine Clay)		S-12	SS	17-14-14-11	20"				
				S-13	SS	3-4-5-10	12"				
50		Very stiff to hard, gray, silty clay, trace to some sand and gravel. (Marine Clay)		S-14	SS	2-2-4-3	6"				
	53										
	-36.7										
55				S-15	SS	28-14-20-34	6"				
60				S-16	SS	8-13-19-2	4"				
65				S-17	SS	7-11-14-11	8"				
70				S-18	SS	5-8-10-14	22"				
75				S-19	SS	11-14-16-14	8"				
80	80										
	-63.7										

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
Consulting Geotechnical EngineersDRAWN: F.G.P.
CHECKED: J.W.P.

SIMMONS COLLEGE
BOSTON, MASSACHUSETTS
LOCATION SEE FIG.2

RECORD OF BOREHOLE B-208

PROJECT: 4371

SHEET 3 of 5
DATE: AUGUST 19, 2005
DATUM BOSTON CITY BASE
HW CASING TO 35'

SAMPLER HAMMER WT.140 LB. DROP 30 IN.

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEV	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
85		Stiff, gray, silty clay, trace sand. (Marine Clay)		S-20	SS	4-6-6-10	24"			
88	-71.7	Dense, gray, silty sand, some clay and gravel. (Marine Sand)		S-21	SS	8-6-8-11	24"			
90				S-22	SS	19-20-13-13	22"			
93	-76.7	Very stiff to hard, gray, silty clay, trace to some sand or sand lenses. (Marine Clay)		S-23	SS	WOR\18"-1	24"			
95										
100				S-24	SS	7-12-15-20	16"			
105				S-25	SS	14-15-21-23	24"			
110				S-26	SS	10-12-12-21	22"			
115				S-27	SS	8-12-18-2	24"			
120	-104									

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
Consulting Geotechnical Engineers

DRAWN: F.G.P.
CHECKED: J.W.P.





SIMMONS COLLEGE
BOSTON, MASSACHUSETTS
LOCATION SEE FIG.2

RECORD OF BOREHOLE B-208

PROJECT: 4371

SHEET 4 of 5
DATE: AUGUST 19, 2005
DATUM BOSTON CITY BASE
HW CASING TO 35'

SAMPLER HAMMER WT.140 LB. DROP 30 IN.

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEVN	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
	123	Very stiff, gray, silty clay with few sand lenses. (Marine Clay)		S-28	SS	11-10-16-20	20"			
	-107									
125		Dense to very dense, gray, fine sand, trace to some silt to fine sand with silty clay layers. (Marine Sand)		S-29	SS	12-19-21-21	18"			
130				S-30	SS	21-28-30-35	20"			
135				S-31	SS	24-25-30-32	16"			
140				S-32	SS	121-28-40-38	16"			
145				S-33	SS	19-24-21-35	14"			
150				S-34	SS	20-17-25-50	4"			
	152									
	-136									
155		Very dense, gray, silt, sand and gravel with weathered argillite. (Glacial Till)		S-35	SS	51-36-30-38	4"			
160										

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
Consulting Geotechnical Engineers


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SIMMONS COLLEGE
BOSTON, MASSACHUSETTS
LOCATION SEE FIG.2

RECORD OF BOREHOLE B-208

PROJECT: 4371
SHEET 5 of 5
DATE: AUGUST 19, 2005
DATUM BOSTON CITY BASE
HW CASING TO 35'

SAMPLER HAMMER WT.140 LB. DROP 30 IN.

SOIL PROFILE				SAMPLES			LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEVN	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)		
	162			S-36	SS	36-41-46-42	5"		
	-146	End of Borehole							
165									
170									
175									
180									
185									
190									
195									
200									

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
Consulting Geotechnical Engineers

DRAWN: F.G.P.
CHECKED: J.W.P.

SIMMONS COLLEGE
BOSTON, MASSACHUSETTS
LOCATION SEE FIG.2

RECORD OF BOREHOLE B-209

PROJECT: 4371

SHEET 1 of 5

DATE: AUGUST 15, 2005

DATUM BOSTON CITY BASE

HW CASING TO 145'

SAMPLER HAMMER WT.140 LB. DROP 30 IN.

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEV.	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
0	0	Ground Surface								
	16.9	Asphalt								
		Very loose to compact, silty sand, trace to some gravel with ash, cinder, glass. (Fill)		S-1	SS	13-16-13-10	12"			
				S-2	SS	6-4-3-3	17"			
5	6			S-3	SS	3-1-1-1	8"			
	10.9	Very loose, brown to black, organic silt with ash and cinders, glass. (Fill)		S-4	SS	1-1-2-1	6"			
				S-5	SS	1-2-1-1	8"			
10	11			S-6	SS	4-2	12"			
	5.9	Very soft to firm, gray-brown-black organic silt, some fibrous peat. (Organics)		S-6A	SS	3-3	12"			
15				S-7	SS	3-2-3-2	24"			
20				S-8	SS	WOH 12"-11 1/2"	18"			
		Sand and gravel observed in wash. (Glacial Outwash)								
25				S-9	SS	1-2-1-1	11"			
30	31.5	Hard to stiff, yellow-gray silty clay. (Marine Clay)		S-10	SS	5-9-9-14	15"			
	-14.6									
	34									
	-17.1			S-11	SS	14-15-16-21	16"			
35										
40										

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
Consulting Geotechnical Engineers

DRAWN: F.G.P.
CHECKED: J.W.P.




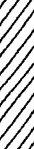


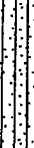
SIMMONS COLLEGE
BOSTON, MASSACHUSETTS
LOCATION SEE FIG.2

RECORD OF BOREHOLE B-209

PROJECT: 4371

SHEET 2 of 5
DATE: AUGUST 15, 2005
DATUM BOSTON CITY BASE
HW CASING TO 145'

SAMPLER HAMMER WT.140 LB. DROP 30 IN.

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEV	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
45	45 -28.1	Hard to stiff, yellow-gray silty clay. (Marine Clay)		S-12	SS	4-5-16-21	24"			
				S-13	SS	3-4-4-6	24"			
50										
				S-14	SS	WOR\18"-1	24"			
55		Very soft to firm, gray silty clay, silty clay with occasional seams of silty sand. (Marine Clay)								
				S-15	SS	WOR\12"-1-2	24"			
60										
				S-16	SS	3-5-8-18	24"			
65	65 -48.1			S-17	SS	9-16-15-22	12"			
70		Dense, gray, fine sand, some silt to silty fine sand. (Marine Sand)								
				S-18	SS	25-29-19-25	14"			
75	74 -57.1									
				S-19	SS					
80										

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
Consulting Geotechnical Engineers

DRAWN: F.G.P.
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SIMMONS COLLEGE

BOSTON, MASSACHUSETTS

LOCATION SEE FIG.2

SAMPLER HAMMER WT.140 LB. DROP 30 IN.

RECORD OF BOREHOLE B-209

PROJECT: 4371

SHEET 3 of 5

DATE: AUGUST 15, 2005

DATUM BOSTON CITY BASE

HW CASING TO 145'

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEVN	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
85		Very stiff to hard, gray, silty clay with few sand lenses. (Marine Deposit)		S-20	SS	7-17-22-26	18"			
90				S-21	SS	17-26-55-40	24"			
95				S-22	SS	8-10-16-20	24"			
100		Very dense, gray, fine to medium sand with silty clay lenses. (Marine Sand)		S-23	SS	8-10-15-15	24"			
104				S-24	SS	3-7-7-6	24"			
105	-87.1	Hand, gray, silty clay with a silt and fine sand layer. (Marine Clay)								
109	-92.1			S-25	SS	32-44-42-63	18"			
110		Very dense, gray, fine sand, some silt with a silty clay layer. (Marine Sand)								
114	-96.6			S-26	SS	29-15-54-63	8"			
115										
120				S-27	SS	28-31-36-63	14"			
120	-103									

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
Consulting Geotechnical EngineersDRAWN: F.G.P.
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SIMMONS COLLEGE

BOSTON, MASSACHUSETTS

LOCATION SEE FIG.2

SAMPLER HAMMER WT.140 LB. DROP 30 IN.

RECORD OF BOREHOLE B-209






PROJECT: 4371

SHEET 4 of 5

DATE: AUGUST 15, 2005

DATUM BOSTON CITY BASE

HW CASING TO 145'

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEV	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
125	125	Hard, gray silty clay, trace sand and gravel. (Marine Clay)		S-28	SS	24-21-48-74	16"			
125	-108									
130		Very dense, gray, silty fine sand. (Marine Sand)		S-29	SS	38-46-45-48	18"			
130										
135				S-30	SS	30-44-57-53	18"			
135										
139		Hard, gray, silty clay, trace sand and gravel. (Marine Clay)		S-31	SS	23-33-47-43	16"			
140	-122									
144		Very dense, gray, gravel, some sand and silt to silt and sand, some gravel with weathered argillite. (Glacial Till)		S-32	SS	15-20-31-46	18"			
145	-127									
150				S-33	SS	29-54-39-41	10"			
150										
155				S-34	SS	58-42-40-55	6"			
155		Run 1: 156'-161' RQD=0%								
156				S-35	SS	100/5"	4"			
160	-139			R1	RC		0"			

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
Consulting Geotechnical EngineersDRAWN: F.G.P.
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SIMMONS COLLEGE
BOSTON, MASSACHUSETTS
LOCATION SEE FIG.2

RECORD OF BOREHOLE B-209

PROJECT: 4371

SHEET 5 of 5
DATE: AUGUST 15, 2005
DATUM BOSTON CITY BASE
HW CASING TO 145'

SAMPLER HAMMER WT.140 LB. DROP 30 IN.

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEVN	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
		Moderately hard, moderately to severely weathered, moderately to slightly fractured, gray to light gray, finegrained, ARGILLITE, very close to close fractures, very thin bedding. (Bedrock) Run 2: 161'-165' RQD = 35.3%		R2	RC	8-8-7-8 Min./Ft.	34"			
165	165 -148	End of Borehole								
170										
175										
180										
185										
190										
195										
200										

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
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Boring # B-210		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-26-05		Date End: 08-26-05				Location: See Plan	
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
GROUNDWATER OBSERVATION							
Date: 08-26-05	Depth:		Casing:			Stabilization Period Upon Completion	
DP	S/#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	-	-	-	-	-	-	ASPHALT
-	S-1	1' - 3'	24"	14"	17-9-5-3	3"	
-	-	-	-	-	-	-	
2'6"	-	-	-	-	-	-	
-	S-2	3' - 5'	24"	8"	2-1-2-1	FILL	
-	-	-	-	-	-	-	Brown to gray, sandy gravel, some silt with ash, Cinders, glass and brick (FILL)
-	-	-	-	-	-	-	
5'0"	S-3	5' - 7'	24"	5"	1-1/12"-1	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	S-4	7' - 9'	24"	8"	1-1-1-3	-	
7'6"	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	S-5	9' - 11'	24"	12"	3-3-3-3	-	
-	-	-	-	-	-	-	
10'0"	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	S-6	11' - 13'	24"	13"	1-1-2-2	11'	Brown, fibrous PEAT, some organic silt. (ORGANIC DEPOSIT)
-	-	-	-	-	-	-	
12'6"	-	-	-	-	-	-	
-	S-7	13' - 15'	24"	18"	2-2-2-3	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
15'0"	-	-	-	-	-	15'	Bottom of Exploration = 15'
-	-	-	-	-	-	-	
Driller: C. O'Donnell			Helper:			Inspector:	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
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Fax: (603) 437-0034

Boring # B-211 (pg 1 of 2)		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-26-05		Date End: 08-26-05				Location: See Plan	
Casing: HSA		Sampler: S/S		Casing: 4 1/4" ID		Sampler:	
Type:		S/S		Size:		1-3/8 in. I.D.	
Hammer:		140 lbs.		Fall:		30 in.	
GROUNDWATER OBSERVATION							
Date: 08-26-05	Depth:		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	10"	12-9-8-9		Brown, coarse GRAVEL, some sand and fill.
-							
-							
-	S-2	2' - 4'	24"	10"	3-2-1-1		Brown, fine to coarse SAND, trace of ash, cinders and brick.
2'6"							
-							
-	S-3	4' - 6'	24"	5"	1-1-1-2		Brown, fine to coarse SAND, trace of ash, cinders, brick and glass.
-							
5'0"							
-	S-4	6' - 8'	24"	10"	2-3-5-4		Gray, silty SAND with some glass and ash.
-							
7'6"							
-	S-5	8' - 10'	24"	12"	1-2-3-4		Gray, silty SAND with some ash and cinders.
-							
-						10'	(Fill)
10'0"	S-6	10' - 12'	24"	8"	4-4-6-6		No Recovery (Organic Deposit)
-							
-							
-	S-7	12' - 14'	24"	20"	3-4-6-6		No Recovery
12'6"							
-							
-	S-8	14' - 16'	24"	10"	1-3-3-4		No Recovery
-							
15'0"							
-							
Driller: David Lucia			Helper: Jim Cross			Inspector: Matt	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
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Derry, NH 03038
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Fax: (603) 437-0034

Boring # B-211 (pg 2 of 2)		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-26-05		Date End: 08-26-05				Location: See Plan	
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
G R O U N D W A T E R O B S E R V A T I O N							
Date: 08-26-05	Depth:		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	-	-	-	-	-	16'	-
-	S-9	16' - 18'	24"	20"	2-4-5-5	-	Gray, ORGANIC SILT, trace inorganic silt.
-	-	-	-	-	-	-	-
17'6"	-	-	-	-	-	-	-
-	S-10	18' - 20'	24"	2"	3-5-5-6	-	Gray, ORGANIC SILT, trace inorganic silt.
-	-	-	-	-	-	-	-
-	-	-	-	-	-	20'	-
20'0"	-	-	-	-	-	-	Bottom of Exploration = 20'
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
22'6"	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
25'0"	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
27'6"	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
30'0"	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
Driller: David Lucia			Helper: Jim Cross			Inspector: Matt	
Remarks:							
S/#: Sample		PEN: Penetration		REC: Recovery		S/C: Strata Change	

Phone: (603) 437-1610

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Boring # B-212

Project: Simmons College of Management

Project # G57201

Project Address: 300 The Fenway

City: Boston

State: MA Zip:

Date Start: 08-25-05

Date End: 08-25-05

Location: See Plan

Casing: HSA

Sampler:

Casing: 4 1/4" ID

Sampler:

Type:

S/S

Size:

1-3/8 in. I.D.

Hammer:

140 lbs.

Fall:

30 in.

GROUNDWATER OBSERVATION

Date:
08-25-05Depth:
9'

Casing:

Stabilization Period
Upon Completion

DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	12"	15-12-9-10	3"	ASPHALT
-							Brown, fine to coarse SAND, some silt, trace fine gravel.
-	S-2	2' - 4'	24"	6"	10-10-6-7		Brown, fine to coarse SAND and SILT, some ash.
2'6"							
-							
-	S-3	4' - 6'	24"	10"	3-2-3-3		Brown, fine to coarse SAND and SILT, some ash, organics and cinders.
-							
5'0"							
-	S-4	6' - 8'	24"	15"	6-3-3-3		Brown, fine SAND and SILT, some ash, organics and cinders.
-							
7'6"							
-	S-5	8' - 10'	24"	16"	3-2-3-3		Brown, fine SAND and SILT, some ash, organics and cinders.
-							
-							
10'0"	S-6	10' - 12'	24"	16"	3-2-4-4		Brown, fine SAND and SILT, some ash.
-							
-							
-	S-7	12' - 14'	24"	12"	3-5-3-4	12'	(Fill)
12'6"							Black, ORGANIC SILT and PEAT.
-							
-	S-8	14' - 16'	24"	7"	3-3-3-5		Black, ORGANIC SILT and PEAT.
-							
15'0"						16'	
-							Bottom of Exploration = 16'

Driller: Kenneth Smith

Helper: Dave Lucia

Inspector: Amy

Remarks:

S/#: Sample

PEN: Penetration

REC: Recovery

S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
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Fax: (603) 437-0034

Boring # B-213		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-25-05		Date End: 08-25-05				Location: See Plan	
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
GROUNDWATER OBSERVATION							
Date: 08-25-05	Depth:		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	-	3" - 2'	24"	14"	16-14-8	3"	ASPHALT
-	S-1	2' - 4'	24"	11"	4-3-2-3	12'	Brown, silty sand with some gravel, with ash and cinders, trace glass and organics. (FILL)
2'6"	S-2	4' - 6'	24"	14"	2-2-1-4		
-	S-3	6' - 8'	24"	8"	7-3-3-2		
-	S-4	8' - 10'	24"	10"	2-4-2-1		
5'0"	S-5	10' - 12'	24"	2"	1/12"-4-2		
-	S-6	12' - 14'	24"	18"	1-1/12"-1		
7'6"	S-7						
-						Bottom of Exploration = 16'	
10'0"							
-							
12'6"						16'	
-							
15'0"							
-							
Driller: C. O'Donnell			Helper:			Inspector	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
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Derry, NH 03038
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Fax: (603) 437-0034

Boring # B-214		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-24-05		Date End: 08-24-05				Location: See Plan	
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
GROUNDWATER OBSERVATION							
Date: 08-24-05		Depth: 8'6"		Casing:		Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	18"	20-41-37-15	4"	ASPHALT
-							Brown, fine to coarse SAND and fine gravel, some silt, trace ash.
-	S-2	2' - 4'	24"	18"	12-14-12-13		Black, SILT, some glass, some fine sand.
2'6"							
-							
-	S-3	4' - 6'	24"	8"	7-4-3-2		Brown-black, fine SAND and SILT, some ash, glass and cinders.
-							
5'0"							
-	S-4	6' - 8'	24"	9"	2-2-3-2		Brown-black, fine SAND and SILT, some ash, glass and cinders.
-							
7'6"							
-	S-5	8' - 10'	24"	11"	1-1-1-1		Gray, fine SAND and SILT, some ash, leather and cinders.
-							
-	S-6	10' - 12'	24"	16"	1-1-1-1		Gray, fine SAND and SILT, some ash and cinders.
10'0"							
-							
-	S-7	12' - 14'	24"	17"	1-1-1-1	12'	(Fill)
-							Dark brown, ORGANIC SILT and peat.
12'6"							
-	S-8	14' - 16'	24"	22"	1-1-2-2		Dark brown, ORGANIC SILT and peat.
-							
15'0"						16'	
-							Bottom of Exploration = 16'
Driller: Kenneth Smith			Helper: Dave Lucia			Inspector: Amy	
Remarks:							
S/#: Sample		PEN: Penetration		REC: Recovery		S/C: Strata Change	

Phone: (603) 437-1610

New Hampshire Boring, Inc.
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Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-215		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-29-05		Date End: 08-29-05				Location: See Plan	
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
GROUNDWATER OBSERVATION							
Date: 08-29-05	Depth: 8'6"		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	11"	14-31-28-20	3"	ASPHALT
-							Brown, fine to coarse SAND and medium gravel, some silt.
-	S-2	2' - 4'	24"	10"	18-18-38-20		Brown, fine to coarse SAND and medium gravel, some silt.
2'6"							
-							
-	S-3	4' - 6'	24"	8"	2-3-4-3		Brown, fine to coarse SAND, some silt, trace ash.
-							
5'0"							
-	S-4	6' - 8'	24"	5"	3-1-3-2		Brown, fine to coarse SAND, some silt and ash.
-							
7'6"							
-	S-5	8' - 10'	24"	5"	2-1-2-3		Brown, fine to coarse SAND, some silt, ash and brick.
-							
-						10'	(Fill)
10'0"	S-6	10' - 12'	24"	24"	3-2-2-2		Gray, ORGANIC SILT and PEAT.
-							
-							
-	S-7	12' - 14'	24"	2"	2-2-2-2		Gray, ORGANIC SILT and PEAT.
12'6"							
-						14'	
-							Bottom of Exploration = 14'
15'0"							
-							
Driller: Kenneth Smith			Helper: Dave Lucia			Inspector: Amy	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.

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P.O. Box 165

Derry, NH 03038

E-Mail: nhb@nhboring

Boring # B-216

Project: Simmons College of Management

Project # G57201

Project Address: 300 The Fenway

City: Boston

State: MA Zip:

Date Start: 08-26-05

Date End: 08-26-05

Location: See Plan

Casing: HSA

Sampler:

Casing: 4 1/4" ID

Sampler:

Type:

S/S

Size:

1-3/8 in. I.D.

Hammer:

140 lbs.

Fall:

30 in.

GROUNDWATER OBSERVATION

Date:
08-26-05

Depth:

7'5"

Casing:

Stabilization Period

Upon Completion

DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	20"	1-6-5-6		Brown, FILL, some medium gravel, trace of ash in tip of spoon.
-							
-							
-	S-2	2' - 4'	24"	16"	4-3-5-4		Brown, FILL and sand, some ash.
2'6"							
-							
-							
-	S-3	4' - 6'	24"	20"	1-1-3-5		Brown, FILL and sand, some ash.
-							
5'0"							
-							
-	S-4	6' - 8'	24"	16"	1-2-2-3		Gray, SILT and sand, some fill.
-							
-							
7'6"						8'	(Fill)
-	S-5	8' - 10'	24"	18"	2-3-2-1		Gray SILT, trace of organics, sand and peat.
-							
-							
10'0"	S-6	10' - 12'	24"	24"	2-3-2-2		Gray SILT, trace of organics, sand and peat.
-							
-							
-						12'	
-							
12'6"							Bottom of Exploration = 12'
-							
-							
-							
-							
15'0"							
-							

Driller: Kenneth Smith

Helper: Dave Lucia

Inspector: Amy

Remarks:

S/#: Sample

PEN: Penetration

REC: Recovery

S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
P.O. Box 165
Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-217

Project: Simmons College of Management

Project # G57201

Project Address: 300 The Fenway

City: Boston

State: MA Zip:

Date Start: 08-25-05

Date End: 08-25-05

Location: See Plan

Casing: HSA

Sampler:

Casing: 4 1/4" ID

Sampler:

Type:

S/S

Size:

1-3/8 in. I.D.

Hammer:

140 lbs.

Fall:

30 in.

GROUNDWATER OBSERVATION

Date:
08-25-05Depth:
9'

Casing:

Stabilization Period
Upon Completion

DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	14"	16-18-20-20	4"	ASPHALT
-						2'	Brown, fine to coarse SAND, some silt, trace medium gravel.
-	S-2	2' - 4'	24"	10"	16-18-8-8		Brown, fine to coarse SAND and SILT.
2'6"							
-							
-	S-3	4' - 6'	24"	6"	2-1-1-1		Brown, fine SAND and SILT, some ash and cinders.
-							
5'0"							
-	S-4	6' - 8'	24"	6"	3-1-2-2		Brown, fine SAND and SILT, some ash, cinders and brick.
-							
7'6"							
-	S-5	8' - 10'	24"	18"	5-5-3-3		Brown, fine SAND and SILT, trace coarse sand, trace ash, cinders.
-							
-							
10'0"	S-6	10' - 12'	24"	16"	2-1-2-4		Brown, SILTY SAND, trace ash and cinders.
-							
-							(Fill)
-						12'	
-	S-7	12' - 14'	24"	16"	3-1-2-2		Brown, ORGANIC SILT and PEAT.
12'6"							
-						14'	
-							Bottom of Exploration at 14'
-							
15'0"							
-							

Driller: Kenneth Smith

Helper: Dave Lucia

Inspector: Amy

Remarks:

S/#: Sample

PEN: Penetration

REC: Recovery

S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
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Boring # B-218		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-24-05		Date End: 08-24-05				Location: See Plan	
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
GROUNDWATER OBSERVATION							
Date: 08-24-05	Depth: 9'		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	16"	28-27-18-10	4"	ASPHALT
-							Brown, fine to coarse SAND, some silt, trace fine to medium gravel.
-	S-2	2' - 4'	24"	13"	10-11-9-7		Brown-gray, fine to medium SAND, some silt, some ash, wood and cinders.
2'6"							
-							
-	S-3	4' - 6'	24"	8"	7-7-9-8		Brown, fine to coarse SAND, some ash, brick and glass.
5'0"							
-							
-	S-4	6' - 8'	24"	16"	6-8-14-8		Brown, fine to coarse SAND, some ash, brick and glass.
7'6"							
-							
-	S-5	8' - 10'	24"	8"	28-21-10-12		Brown, fine to coarse SAND some brick, ash and glass.
-							
-							
10'0"	S-6	10' - 12'	24"	8"	2-1-2-2		Gray, fine to coarse SAND and SILT, some ash, cinders.
-							
-						12'	(Fill)
-	S-7	12' - 14'	24"	16"	2-2-2-3		Dark brown, ORGANIC SILT and peat.
12'6"							
-							
-	S-8	14' - 16'	24"	18"	2-2-3-3		Dark brown, ORGANIC SILT and peat.
-							
15'0"						16'	
-							Bottom of Exploration = 16'
Driller: Kenneth Smith			Helper: Dave Lucia			Inspector: Amy	
Remarks:							
S/#: Sample		PEN: Penetration		REC: Recovery		S/C: Strata Change	

Phone: (603) 437-1610

New Hampshire Boring, Inc.
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Boring # B-219

Project: Simmons College of Management

Project # G57201

Project Address: 300 The Fenway

City: Boston

State: MA Zip:

Date Start: 08-29-05

Date End: 08-29-05

Location: See Plan

Casing: HSA

Sampler:

Casing: 4 1/4" ID

Sampler:

Type:

S/S

Size:

1-3/8 in. I.D.

Hammer:

140 lbs.

Fall:

30 in.

GROUNDWATER OBSERVATION

Date:
08-29-05Depth:
8'

Casing:

Stabilization Period
Upon Completion

DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	8"	11-11-13-7	3"	ASPHALT
-							Brown, fine to coarse SAND, some silt, trace medium gravel.
-	S-2	2' - 4'	24"	8"	4-3-3-3		Black, fine to coarse SAND, some silt, some ash.
2'6"							
-							
-	S-3	4' - 6'	24"	9"	3-2-2-4		Brown, fine to coarse, SAND and silt, trace ash.
-							
5'0"							
-	S-4	6' - 8'	24"	11"	2-2-6-6		Black, fine SAND, some, silt, clay and ash.
-							
-							
7'6"							
-	S-5	8' - 10'	24"	11"	2-2-6-6		Black, fine SAND, some, silt, clay and ash.
-							
-							
10'0"	S-6	10' - 12'	24"	16"	2-2-4-4	10'	(Fill)
-							Gray, ORGANIC SILT and PEAT.
-							
-	S-7	12' - 14'	24"	18"	4-3-2-4		Gray, ORGANIC SILT and PEAT.
-							
12'6"						14'	
-							
-							
-							
15'0"							Bottom of Exploration = 14'
-							

Driller: Kenneth Smith

Helper: Dave Lucia

Inspector: Amy

Remarks:

S/#: Sample

PEN: Penetration

REC: Recovery

S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
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Fax: (603) 437-0034

Boring # B-220		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-25-05		Date End: 08-25-05				Location: See Plan	
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
G R O U N D W A T E R O B S E R V A T I O N							
Date: 08-25-05	Depth:		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	4" - 2'	24"	12"	13-13-10	4"	ASPHALT
-	S-2	2' - 4'	24"	14"	6-15-18-12		
2'6"							
-	S-3	4' - 6'	24"	12"	5-2-1-1		Black, sand, some gravel, trace to some silt varying to a silty sand with some gravel, with organics, ash and cinders (FILL)
-							
5'0"	S-4	6' - 8'	24"	7"	2-1-2-1		
-							
-	S-5	8' - 10'	24"	13"	2-3-4-3		
-							
10'0"	S-6	10' - 12'	24"	6"	5-5-4-4		
-							
-	S-7	12' - 14'	24"	8"	3-3-3-2		
12'6"							
-	S-8	14' - 16'	24"	20"	3-2-3-3		
-						14'	
15'0"						16'	Gray/brown, fibrous peat and organic silt (ORGANIC DEPOSIT) Bottom of Exploration = 16'
-							
Driller: C. O'Donnell			Helper:			Inspector: AMF	
Remarks:							
S/#: Sample		PEN: Penetration		REC: Recovery		S/C: Strata Change	

Phone: (603) 437-1610

New Hampshire Boring, Inc.
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Boring # B-221		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-24-05		Date End: 08-24-05				Location: See Plan	
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
G R O U N D W A T E R O B S E R V A T I O N							
Date: 08-24-05	Depth: 9'		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	18"	36-20-19-12	4"	ASPHALT
-							Black, fine to coarse SAND and SILT, some fine to medium gravel, trace ash.
-	S-2	2' - 4'	24"	12"	10-10-16-16		Black, fine to coarse SAND and SILT, some fine to medium gravel, trace ash, cinders.
2'6"							
-							
-	S-3	4' - 6'	24"	10"	4-4-6-6		Black, fine to coarse SAND and SILT some ash, cinders.
5'0"							
-							
-	S-4	6' - 8'	24"	18"	6-2-3-5		Black, fine to coarse SAND and SILT some ash, cinders and organics.
7'6"							
-							
-	S-5	8' - 10'	24"	18"	5-3-3-12		Black, fine SAND and SILT, some ash and cinders.
10'0"							
-							
-							
-	S-6	10' - 12'	24"	8"	12-7-5-3		Black, fine SAND and SILT, some ash, cinders and brick fragments.
12'6"							
-							
-	S-7	12' - 14'	24"	4"	3-2-3-3		Black, fine SAND and SILT, some ash, cinders and brick fragments.
-							
-						14'	(Fill)
-	S-8	14' - 16'	24"	12"	3-2-3-2		Dark brown, ORGANIC SILT and PEAT.
15'0"							
-	S-98	16' - 18'	24"	4"	3-3-4-4	18'	Dark brown, ORGANIC SILT and PEAT.
-							Bottom of Exploration = 18'
Driller: Kenneth Smith			Helper: Dave Lucia			Inspector: Amy	
Remarks:							
S/#: Sample		PEN: Penetration		REC: Recovery		S/C: Strata Change	

Phone: (603) 437-1610

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Fax: (603) 437-0034

Boring # B-222 OW (pg 1of 2)		Project: Simmons College of Management		Project # G57201			
Project Address: 300 The Fenway		City: Boston		State: MA Zip:			
Date Start: 08-29-05		Date End: 08-29-05		Location: See Plan			
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:			
				Sampler: 1-3/8 in. I.D. 30 in.			
GROUNDWATER OBSERVATION							
Date: 08-29-05	Depth: g'		Casing:		Stabilization Period Upon Completion		
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	16"	16-25-27-29	3"	ASPHALT
-							Brown, fine to coarse SAND, some silt, some brick.
-	S-2	2' - 4'	24"	12"	24-27-20-11		Brown, fine to coarse SAND, some silt, some brick , trace ash.
2'6"							
-							
-	S-3	4' - 6'	24"	12"	2-2-2-2		Gray, fine to coarse SAND and ASH.
-							
5'0"							
-							
-	S-4	6' - 8'	24"	10"	3-2-2-4		Gray, fine to coarse SAND and ASH.
-							
7'6"						8'	(Fill)
-	S-5	8' - 10'	24"	10"	3-3-3-4		Gray, ORGANIC SILT.
-							
-							
10'0"	S-6	10' - 12'	24"	24"	3-2-3-4		Gray, ORGANIC SILT and PEAT.
-							
-							
-	S-7	12' - 14'	24"	2"	3-2-2-3		Gray, ORGANIC SILT and PEAT.
12'6"							
-							
-							
-							
15'0"							
-							
Driller: Kenneth Smith			Helper: David Lucia			Inspector: Matt	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
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Boring # B-222 OW (pg 2 of 2) Project: Simmons College of Management

Project # G57201

Project Address: 300 The Fenway

City: Boston

State: MA Zip:

Date Start: 08-29-05

Date End: 08-29-05

Location: See Plan

Casing: HSA

Sampler:

Casing: 4 1/4" ID

Sampler:

Type:

S/S

Size:

1-3/8 in. I.D.

Hammer:

140 lbs.

Fall:

30 in.

GROUNDWATER OBSERVATION

Date:
08-29-05

Depth:
g'

Casing:

Stabilization Period
Upon Completion

DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-							
-							
-							
17'6"							
-	S-9	18' - 20'	24"	24"	3-3-4-5		Gray, ORGANIC SILT and PEAT.
-							
-							
20'0"						20'	
-							Bottom of Exploration = 20'
-							
-							Installed 2" PVC Well at 15'
-							10' Screen
22'6"							5' Riser
-							1 - Road Box
-							
-							
25'0"							
-							
-							
-							
27'6"							
-							
-							
-							
30'0"							
-							

Driller: Kenneth Smith

Helper: David Lucia

Inspector: Matt

Remarks:

S/#: Sample

PEN: Penetration

REC: Recovery

S/C: Strata Change

Phone: (603) 437-1610

New Hampshire Boring, Inc.
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Boring # B-223		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-25-05		Date End: 08-25-05				Location: See Plan	
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
GROUNDWATER OBSERVATION							
Date: 08-25-05	Depth: 9'6"		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	18"	11-15-10-10	3"	ASPHALT
-							Black, fine to coarse SAND and SILT, some brick trace ash in tip of spoon.
-	S-2	2' - 4'	24"	10"	5-4-2-2		Brown, fine to coarse SAND and SILT, some ash and cinders.
2'6"							
-							
-	S-3	4' - 6'	24"	4"	2-1-1-2		Brown, fine to coarse SAND and SILT, some ash, cinders.
-							
5'0"							
-	S-4	6' - 8'	24"	12"	7-7-5-5		Gray, clayey SAND, some coarse sand.
-							
-							
7'6"							
-	S-5	8' - 10'	24"	4"	5-2-2-2		Gray, fine to coarse SAND and SILT, some ash.
-							
-							
10'0"	S-6A	10' - 11'6"	18"	3"	2-1-2		Brown, fine to coarse SAND and SILT.
-	S-6B	11'6" - 12'	6"	1"	3		
-						11'6"	(Fill)
-							
-	S-7	12' - 14'	24"	18"	2-1-2-3		ORGANIC SILT and PEAT. Brown, ORGANIC SILT and PEAT.
12'6"							
-						14'	
-							
-							Bottom of Exploration at 14'
15'0"							
-							
Driller: Kenneth Smith			Helper: Dave Lucia			Inspector: Amy	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

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Boring # B-224 (pg 1 of 2)

Project: Simmons College of Management

Project # G57201

Project Address: 300 The Fenway

City: Boston

State: MA Zip:

Date Start: 08-26-05

Date End: 08-26-05

Location: See Plan

Casing: HSA

Sampler:

Casing: 4 1/4" ID

Sampler:

Type:

S/S

Size:

1-3/8 in. I.D.

Hammer:

140 lbs.

Fall:

30 in.

GROUNDWATER OBSERVATION

Date:
08-26-05Depth:
18'

Casing:

Stabilization Period
Upon Completion

DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	8"	8-29-10-8	3"	ASPHALT
-							Brown, FILL, some medium gravel, some silt, ash and cinders.
-	S-2	2' - 4'	24"	16"	4-5-7-7		Brown, FILL, some ash, some silt, brick, glass.
2'6"							
-							
-	S-3	4' - 6'	24"	18"	5-5-3-3		Black-brown, coarse SAND, some ash, some silt.
-							
5'0"							
-	S-4	6' - 8'	24"	5"	5-4-5-5		Gray, silty SAND, some gravel.
-							
-							
7'6"							
-	S-5	8' - 10'	24"	8"	3-2-3-2		Gray, ORGANIC SILT with PEAT, trace ash and cinders.
-							
-							
-						10'	(Fill)
10'0"	S-6	10' - 12'	24"	24"	2-1-1-2		Gray, ORGANIC SILT and PEAT.
-							
-							
-	S-7	12' - 14'	24"	22"	4-2-2-1		Gray, ORGANIC SILT and PEAT.
12'6"							
-							
-							
-	S-8	14' - 16'	24"	2"	3-2-3-2		Gray, ORGANIC SILT and PEAT.
-							
15'0"							
-							

Driller: David Lucia

Helper: Jim Cross

Inspector: Matt

Remarks:

S/#: Sample

PEN: Penetration

REC: Recovery

S/C: Strata Change

Fax: (603) 437-0034

S/C: Strata Change

Phone: (603) 437-1610

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Boring # B-225		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-25-05		Date End: 08-25-05				Location: See Plan	
Casing: HSA Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4 1/4" ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
GROUNDWATER OBSERVATION							
Date: 08-25-05	Depth:		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	15"	28-27-13-8	4"	ASPHALT
-	S-2	2' - 4'	24"	14"	3-2-3-3	4"	Brown, fine to coarse SAND and fine to medium gravel, some silt.
2'6"							Brown, fine to coarse SAND and fine to medium gravel, some silt.
-							
-	S-3	4' - 6'	24"	4"	5-3-5-2	4"	Brown, fine to coarse SAND and SILT, some ash.
-							
5'0"							
-	S-4	6' - 8'	24"	12"	5-3-5-6	4"	Brown, fine to coarse SAND and SILT, some ash.
-							
7'6"							
-	S-5	8' - 10'	24"	16"	3-3-4-4	10'	Black, fine to coarse SAND and SILT, some ash.
-							
-							
10'0"	S-6	10' - 12'	24"	15"	1-1-3-2	14'	(Fill)
-							
-							
-	S-7	12' - 14'	24"	12"	1-2-3-3	14'	Brown, ORGANIC SILT and PEAT.
12'6"							
-							
-							Bottom of Exploration = 14'
15'0"							
-							
Driller: Kenneth Smith			Helper: Dave Lucia			Inspector: Amy	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

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Boring # B-226 (Pg 1 of 2)		Project: Simmons College of Management				Project # G57201	
Project Address: 300 The Fenway				City: Boston		State: MA Zip:	
Date Start: 08-24-05		Date End: 08-24-05				Location: See Plan	
Casing: HW Type: Hammer:		Sampler: S/S 140 lbs.		Casing: 4"ID Size: Fall:		Sampler: 1-3/8 in. I.D. 30 in.	
G R O U N D W A T E R O B S E R V A T I O N							
Date: 08-24-05	Depth:		Casing:			Stabilization Period Upon Completion	
DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-1	4" - 2'	24"		5-2	4"	ASPHALT
-	S-2	2' - 4'	24"		2-4	FILL	Brown/gray/black, sand, trace to some gravel and silt varying to sand and silt with some gravel, with ash and cinders, brick, glass and organics (FILL)
2'6"							
-							
-	S-3	4' - 6'	24"	12"	7-7-5-5		
5'0"							
-	S-4	6' - 8'	24"	12"	4-4-3-4		
7'6"							
-	S-5	8' - 10'	24"	16"	3-2-2-5		
10'0"	S-6	10' - 12'	24"	16"	3-2-3-4		
12'6"	S-7	12' - 14'	24"	10"	3-3-2-2		
-	S-8	14' - 16'	24"	18"	3-2-3-3	14'	Brown, fibrous PEAT (ORGANIC DEPOSIT)
15'0"							
Driller: John Mederious			Helper:			Inspector: AMF	
Remarks:							
S/#: Sample			PEN: Penetration		REC: Recovery		S/C: Strata Change

Phone: (603) 437-1610

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Derry, NH 03038
E-Mail: nhb@nhboring

Fax: (603) 437-0034

Boring # B-226 (pg 2 of 2)

Project: Simmons College of Management

Project # G57201

Project Address: 300 The Fenway

City: Boston

State: MA Zip:

Date Start: 08-25-05

Date End: 08-25-05

Location: See Plan

Casing: HSA

Sampler:

Casing: 4 1/4" ID

Sampler:

Type:

S/S

Size:

1-3/8 in. I.D.

Hammer:

140 lbs.

Fall:

30 in.

GROUNDWATER OBSERVATION

Date:
08-25-05

Depth:

Casing:

Stabilization Period

Upon Completion

DP	S./#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
-	S-9	16' - 18'	24"		2-2-2-2	18'	Brown, fibrous PEAT.
17'6"							Bottom of Exploration = 18'
-							
-							
-							
-							
20'0"							
-							
-							
-							
22'6"							
-							
-							
-							
25'0"							
-							
-							
-							
27'6"							
-							
-							
-							
30'0"							
-							

Driller: John Mederious

Helper:

Inspector: AMF

Remarks:

S/#: Sample

PEN: Penetration

REC: Recovery

S/C: Strata Change

SIMMONS COLLEGE

BOSTON, MASSACHUSETTS

LOCATION SEE FIG.2

SAMPLER HAMMER WT.140 LB. DROP 30 IN.






RECORD OF BOREHOLE B-227

SHEET 1 of 5

DATE: AUGUST 18, 2005

DATUM BOSTON CITY BASE

HW CASING TO 155.5'

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEV	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
0	0	Ground Surface								
	15.4	Asphalt								
		Loose to compact, brown, sand and gravel, some silt to gravelly sand, some silt to silty sand, some gravel with wood, ash, cinder and brick. (Fill)		S-1	SS	25-16-10-11	15"			
				S-2	SS	8-8-10-9	8"			
5				S-3	SS	11-7-9-12	6"			
				S-4	SS	8-9-4-3	7"			
10				S-5	SS	4-4-4-6	10"			
	11									
	4.4	Very loose, dark brown, fibrous organic silt. (Organics)								
15				S-6	SS	7-2-2-4	24"			
	17.5									
	-2.1	Very loose, dary gray, organic silt with few fibers. (Organics)								
20				S-7	SS	2-1-2-2	20"			
25				S-8	SS	1\12"-1\12"	24"			
30				S-9	SS	WOR\12"	24"			
	32.5									
	-17.1	Sand in wash water. (Glacial Outwash)								
	34									
	-18.6	Stiff to hard, gray, silty clay to silty clay with silty fine sand lenses. (Marine Clay)		S-10	SS	17-15-15-12	13"			
35										
	40									
	-24.6									

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
Consulting Geotechnical EngineersDRAWN: F.G.P.
CHECKED: J.W.P.

SIMMONS COLLEGE

BOSTON, MASSACHUSETTS

LOCATION SEE FIG.2

SAMPLER HAMMER WT.140 LB. DROP 30 IN.

RECORD OF BOREHOLE B-227


PROJECT: 4371

SHEET 2 of 5

DATE: AUGUST 18, 2005

DATUM BOSTON CITY BASE

HW CASING TO 155.5'

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEV	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
		Very stiff to very soft, gray silty clay to silty clay with silt layers, fine sand lense, trace gravel. (Marine Deposit)		S-11	SS	7-7-5-5	24"			
45										
				S-12	SS	5-5-4-5	20"			
50				S-13	SS	18-15-7-7	20"			
55				S-14	SS	4-6-8-7	22"			
60				S-15	SS	9-7-6-8	19"			
65				S-16	SS	6-9-14-12	7"			
70				S-17	SS	4-4-5-6	24"			
75				S-18	SS	WOR\12"-2-3	24"			
80	80									
	-64.6									

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
Consulting Geotechnical EngineersDRAWN: F.G.P.
CHECKED: J.W.P.

SIMMONS COLLEGE
BOSTON, MASSACHUSETTS

RECORD OF BOREHOLE B-227

LOCATION SEE FIG.2




SAMPLER HAMMER WT.140 LB. DROP 30 IN.

SHEET 3 of 5

DATE: AUGUST 18, 2005

DATUM BOSTON CITY BASE

HW CASING TO 155.5'

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEV	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
85		Stiff to very stiff, gray silty clay with silty fine sand lenses. (Marine Clay)		S-19	SS	2-9-14-12	24"			
				S-20	SS	6-6-9-8	24"			
90		Hard, gray, silty clay, trace sand and gravel. (Marine Clay)		S-21	SS	6-9-11-9	24"			
				S-22	SS	11-19-20-21	24"			
94	-78.6	Dense to very dense, brown, gray, fine sand and silt. (Marine Sand)		S-23	SS	18-19-17-20	20"			
99	-83.6			S-24	SS	16-15-16-18	19"			
105				S-25	SS	24-25-25-27	18"			
110				S-26	SS	20-26-24-27	18"			
115										
120	-105									

REMARKS: Depth to water level: 10'

McPHAIL ASSOCIATES, INC.
Consulting Geotechnical Engineers

DRAWN: F.G.P.
CHECKED: J.W.P.

SIMMONS COLLEGE

BOSTON, MASSACHUSETTS

LOCATION SEE FIG.2

SAMPLER HAMMER WT.140 LB. DROP 30 IN.

RECORD OF BOREHOLE B-227

SHEET 4 of 5

DATE: AUGUST 18, 2005

DATUM BOSTON CITY BASE

HW CASING TO 155.5'

SOIL PROFILE				SAMPLES				LABORATORY TESTING	OBSERVATION WELL	
DEPTH	DEPTH ELEV	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / 6"	RECOVERY (IN.)			
		Dense to very dense, gray, fine sand, trace to some silt to silty fine sand. (Marine Sand)		S-27	SS	32-30-30-32	10"			
125										
				S-28	SS	32-29-35-32	14"			
130				S-29	SS	21-28-34-29	13"			
135		Very dense, gray, silty fine sand. (Marine Sand Deposit)		S-30	SS	28-31-30-37	12"			
140				S-31	SS	11-12-19-21	24"			
145				S-32	SS	16-20-17-19	22"			
		Very dense, gray, silt, sand and gravel to sandy silt, some gravel with cobbles and boulders. (Glacial Till) Run 1: 156'-161' RQD = 0%		S-33	SS	51-120	10'			
150	149.2 -134									
155	154.8 -139			S-34	SS	53-100	10"			
				R1	RC	7-7-7-7.5-7MIN. FT.	33"			
160										

REMARKS: Depth to water level: 10'